STR-D790/D990

SERVICE MANUAL

US Model
Canadian Model
UK Model
STR-D790

US Model
Canadian Model
STR-D990

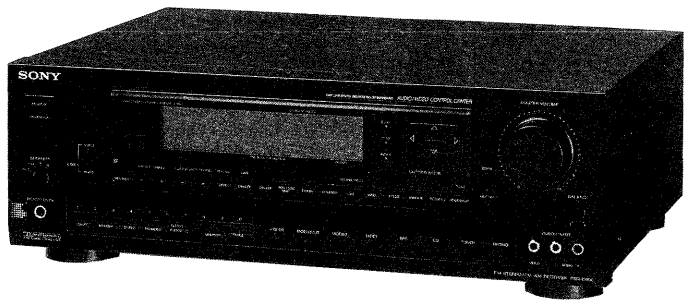

Photo: STR-D990

SPECIFICATIONS

Audio Power Specifications

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

Stereo mode

With 8-ohm load, both channels driven, from 20 - 20,000 Hz, rated 100 watts (STR-D990) or 80 watts (STR-D790) per channel minimum RMS power, with no more than 0.05% total harmonic distortion from 250 milliwatts to rated output.

Surround mode

	STR-D990	STR-D790
FRONT	65 W + 65 W	80 W + 80 W
CENTER	65 W	20 W
REAR	25 W	20 W

Other Specifications

Dynamic power output		STR-D990: 140 W + 140 W (8 ohms) 190 W + 190 W (4 ohms) STR-D790: 105 W + 105 W (8 ohms) 140 W + 140 W (4 ohms)
Harmonic distortion at rated output		Less than 0.05%
Intermodulation (IM) distortion at rated output		Less than 0.05%
Frequency response	PHONO	RIAA equalization curve ±0.5 dB
	CD, DAT, TAPE 1,2 VIDEO 1,2,3*	10 Hz — 70 kHz $^{+0}_{-1}$ dB
Residual noise		Less than 70μV
Damping factor (8 ohms, at 1kHz)		50
Input sensitivity/ impedance	PHONO MM	2.5 mV, 50 kilohms
	DAT,CD, VIDEO 1,2,3* TAPE 1,2	150 mV 50 kilohms
S/N	PHONO MM	87 dB 79 dB** (A,2.5mV)
	DAT, CD VIDEO 1,2,3* TAPE 1,2	105 dB 85 dB** (A,150mV)

— Continued on next page —

使用時は添付資料も参照のこと
Refer to the additional documents.

FM STEREO/FM-AM RECEIVER

SONY®

Other Specifications

Output	DAT OUT, TAPE OUT 1,2 VIDEO 1	150 mV 10 kilohms
	SPEAKERS	Accepts speakers of 8-16 ohms
	HEADPHONES	Accepts headphones of high and low impedance
MUTING	-20dB	
DBFB	+ 10 dB at 70 Hz	
TONE	± 10 dB at 100 Hz and 10 kHz	

* STR-D990 only
** '78IHF

FM tuner section

Frequency range		87.5 — 108.0 MHz
Antenna terminals		300 ohms, balanced 75 ohms, unbalanced
Sensitivity at 50 dB		18.3 dBf, 4.5 µV (mono) 38.3 dBf, 45 µV (stereo)
Usable sensitivity		11.2 dBf, 2 µV (IHF)
S/N	Mono	80 dB
	Stereo	74 dB
Harmonic distortion at 1 kHz	Mono	0.3 %
	Stereo	0.5 %
IM distortion	Mono	0.3 %
	Stereo	0.5 %
Separation		45 dB at 1 kHz
Frequency response		30 Hz — 15 kHz $^{+0}_{-2}$ dB
Selectivity		60 dB at 400 kHz
Capture ratio		1.2 dB
AM suppression ratio		54 dB
Image response ratio		70 dB
IF response ratio		70 dB
Spurious response ratio		80 dB
RF intermodulation at 800 kHz		60 dB
Auto tuning threshold	Low	30 dBf
	High	50 dBf

AM tuner section

Frequency range	530 — 1710 kHz (with 10 kHz interval) 531 — 1710 kHz (with 9 kHz interval) 531 — 1602 kHz (only for STR-D790 U.K. model)
Antenna	Loop antenna
Usable sensitivity	50 dB/m (at 1,000 kHz or 999 kHz)
S/N	54 dB (at 50 mV/m)
Harmonic distortion	0.5% (50 mV/m, 400 Hz)
Selectivity	35 dB (9 kHz), 40 dB (10 kHz)
Auto tuning threshold	55 dB/m

Video section

	STR-D990	STR-D790
Inputs	VIDEO 1,2,3: 1 Vp-p 75 ohms	VIDEO 1,2: 1 Vp-p 75 ohms
Outputs	VIDEO 1, MONITOR: 1 Vp-p 75 ohms	

General

		STR-D990	STR-D790
System	Tuner section	PLL quartz-locked digital synthesizer system	
	Preamplifier section	Low-noise NF type equalizer	
	Power amplifier section	Pure-complimentary SEPP	
Power requirements		120 V AC,60 Hz U.K. model: 240 VAC, 50/60 Hz	
Power consumption		USA model: 240 W Canada model: 320 VA	USA model: 200 W Canada model: 270 VA U.K. model: 230 W
AC outlets		Two switched, total 120 watts	
Dimensions		430 x 147.5 x 350 mm (17 x 5 $^7/_8$ x 13 $^3/_4$ inches)	
Weight		10.5 kg (23 lb 2 oz)	10.3 kg (22 lb 11 oz)

Supplied accessories
FM ribbon antenna (1)
AM loop antenna (1)
Remote commander (1)
Sony Batteries SUM-3(NS) (2)

Design and specifications are subject to change without notice.

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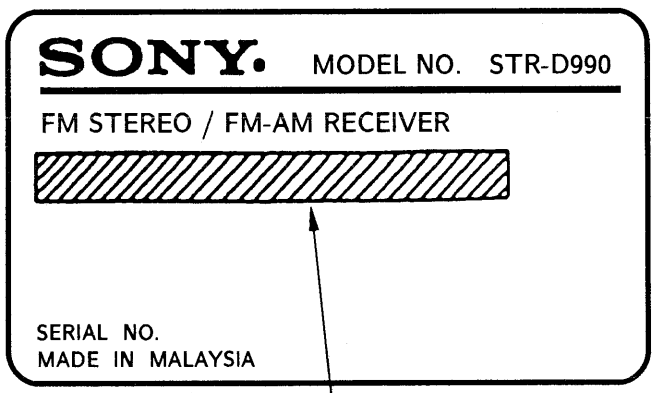
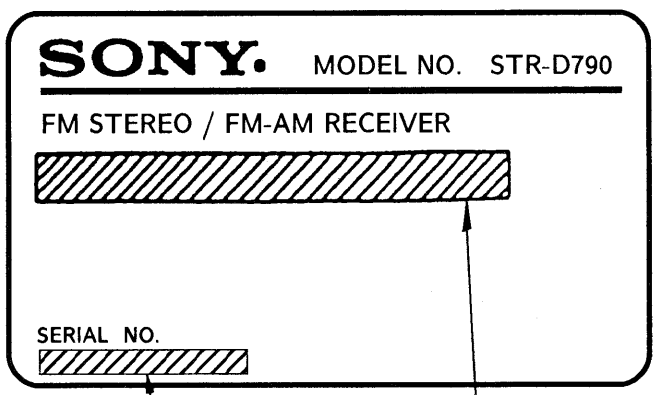
MODEL IDENTIFICATION

- Specification Labels -



US Model : AC 120V 60Hz 240W
Canadian Model : AC 120V 60Hz 320VA



US, Canadian Model : MADE IN MALAYSIA
UK Model : ASSEMBLED IN MALAYSIA

US Model : AC 120V 60Hz 200W
Canadian Model : AC 120V 60Hz 270VA
UK Model : AC 240V~50/ 60Hz 230W

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer :

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers.).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

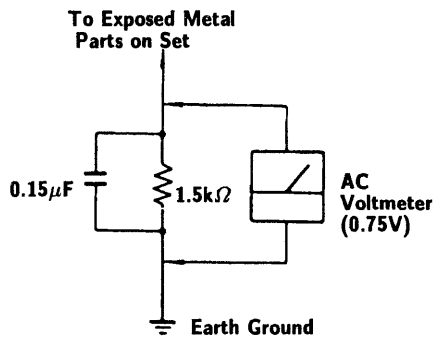
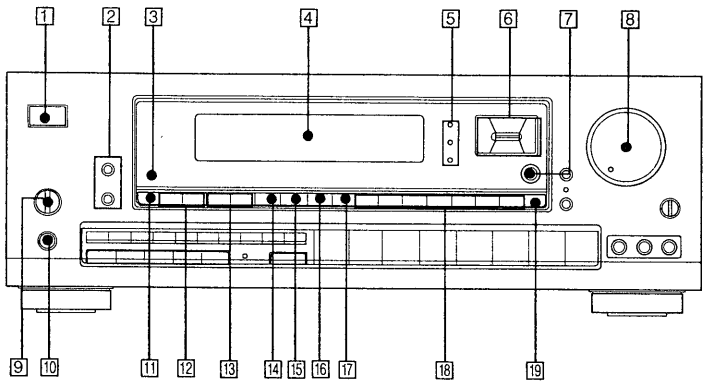
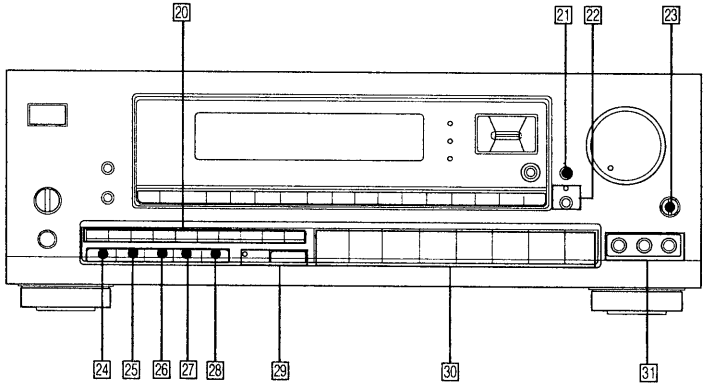


Fig. A. Using an AC voltmeter to check AC leakage.

Parts Identification

Front Panel





1 **POWER switch**
(STANDBY indicator: STR-D790 for UK model only)

2 **EDIT VIDEO/AUDIO buttons** (See pages 24, 25, 26.)
(EDIT VIDEO button: STR-D990 only)

3 **Remote sensor**

4 **Display window**

5 **CURSOR MODE indicators**

6 **CURSOR MODE operation buttons**
(See page 16, 21, 28, 29, 31.)

7 **CURSOR MODE button** (See page 16, 21, 28, 29, 31.)

8 **MASTER VOLUME control** (See page 14.)

9 **SPEAKERS selector** (See page 14.)

10 **HEADPHONES jack**

11 **FREQ/INDEX button** (See pages 18, 22.)

12 **PRESET TUNING –/+ buttons**
(See pages 20, 22.)

13 **INDEX SELECT/TUNING –/+ buttons**
(See pages 18, 22.)

14 **TUNING LEVEL** (See page 18.)

15 **LINK ON/OFF button** (See page 32.)

16 **SOUND FIELD ON/OFF button** (See page 28, 29.)

17 **DOLBY PRO LOGIC MODE button**
(See pages 12, 13.)

18 **SOUND FIELD buttons**
(See pages 28, 29, 30, 31, 32.)

19 **TONE ON/DEFEAT button** (See pages 31.)

20 **Numeric buttons** (See pages 17, 19, 20, 21, 22.)

21 **DBFB button** (See pages 14.)

22 **MUTING button and indicator** (See page 14.)

23 **BALANCE control** (See page 14.)

24 **SHIFT button** (See pages 19, 20, 21.)

25 **MEMORY button** (See page 16, 19, 21.)

26 **DIRECT button** (See page 17.)

27 **FM MODE button** (See page 17.)

28 **FM/AM button** (See page 17,18)

29 **TAPE 2 MONITOR button and indicator** (See page 23.)

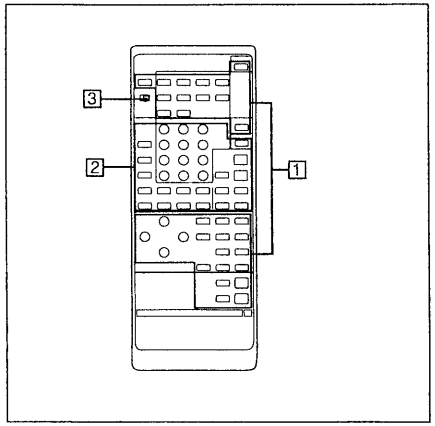
30 **Function selectors**
(VIDEO 3 button: STR-D990 only)

31 **VIDEO 3 INPUT jacks** (STR-D990 only)

This section is extracted from instruction manual.

Parts Identification

Remote Commander RM-U221 US, Canadian model



1 Receiver control section

FUNCTION:
DAT, CD, TUNER, PHONO, VIDEO 1, VIDEO 2, VIDEO 3, TAPE, DIGITAL 1, 2: The each function is selected and the each unit enters its operating mode automatically.
SYSTEM OFF: Turns off the power of the whole system.
POWER: Turns on the power of the receiver.
SOUND FIELD buttons
U/P: This button does not function.
MODE: Selects the sound field mode.
ON/OFF: Turns on/off the sound field system.
BAND: This button does not function.
EQ: Turns on/off the setting of TONE controls.
T. (test) TONE: Generates a pink noise signal that is sent in succession to each speaker.
CURSOR MODE: Select CURSOR MODE.
CURSOR operating buttons
REAR LEVEL +/– buttons: Control the volume of rear speakers (surround level).
CENTER LEVEL +/– buttons : Control the volume of center speaker (surround level).
DBFB button: Turns on/off the DBFB (Dynamic Bass Feedback).
MUTING button: Mutes the sound.
MASTER VOL +/– buttons: Control the receiver volume.
SLEEP: Set to the SLEEP timer mode. In this mode, the unit is automatically turned off after the designated time. (page 15)

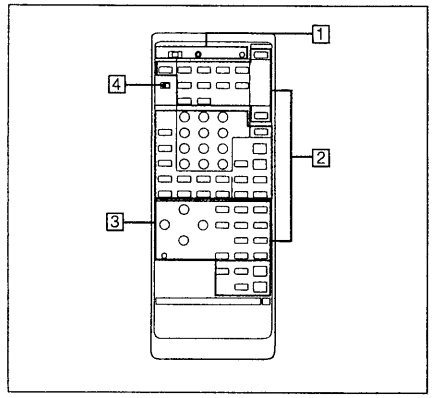
2 Other equipment control section

Numeric buttons (1 to 0): Designate the number.
>10: Designate the number more than 10.
ENTER: Press after designating the TV/VCR channel.
SHIFT: Select the memory page (A, B or C).
TV/VIDEO selector: Selects the program to see : TV or VIDEO.
ANT TV/VTR button: Selects the output signal from the antenna terminal on the VCR, either a TV signal or VCR programs.
CH/PRESET +/– buttons: Select a preset channel.
INDEX: Set to the index tuning mode.
◄◄/►►: fast winding/Manual search
●: Recording
◄/►: Play
■: Stop
II: Pause
I◄◄/►►I: Locates a desired selection.
REV/FWD: Press ● and REV or FWD at the same time.
D (disc) SKIP: Disc skip (for a CD player equipped with a multi-disc changer)
SELECT: Changes the settings of the FUNCTION buttons.

3 SYSTEM/TV mode switch

In TV mode (When setting the SYSTEM/TV selector to TV.)
Only MUTING, MASTER VOL +/– and the operative buttons in TV section on the list described on the next page can be used.

Remote Commander RM-P321 UK model



1 Program control section

Mode selector and indicator (page 24.)
SONY STD: To control Sony equipment.
USER STD: To control equipment whose remote control functions are stored.
LEARN: To store functions of other remote commanders emitting infrared rays.
PROGRAM CLEAR: Clears the stored functions.

2 Receiver control section

FUNCTION:
DAT, CD, TUNER, PHONO, VIDEO 1, VIDEO 2, VIDEO 3, TAPE, DIGITAL 1, 2: The each function is selected and the each unit enters its operating mode automatically. (VIDEO 3, DIGITAL 1, 2 cannot be used.)
SYSTEM OFF: Turns off the power of the whole system.
POWER: Turns on the power of the receiver.
SOUND FIELD buttons
U/P: This button does not function.
MODE: Selects the surround mode.
ON/OFF: Turns on/off the surround system.
BAND: This button does not function.
EQ: This button does not function.
T. (test) TONE: Generates a pink noise signal that is sent in succession to each speaker.
CURSOR MODE: This button does not function.
CURSOR operating buttons: These buttons do not function.
REAR LEVEL +/– buttons: Control the volume of rear speakers (surround level).
CENTER LEVEL +/– buttons : Control the volume of center speaker (surround level).
DBFB button: This button does not function.
MUTING button: Mutes the sound.
MASTER VOL +/– buttons: Control the receiver volume.
SLEEP: This button does not function.
RESET: Resets to the initial state.

3 Other equipment control section

Numeric buttons (1 to 0): Designate the number.
>10: Designate the number more than 10.
ENTER: Press after designating the TV/VCR channel.
SHIFT: Select the memory page (A, B or C).
TV/VIDEO selector: Selects the program to see : TV or VIDEO.
ANT TV/VTR button: Selects the output signal from the antenna terminal on the VCR, either a TV signal or VCR programs.
CH/PRESET +/– buttons: Select a preset channel.
INDEX: Set to the index tuning mode.
◄◄/►►: fast winding/Manual search
●: Recording
◄/►: Play
■: Stop
II: Pause
I◄◄/►►I: Locates a desired selection.
REV/FWD: Press ● and REV or FWD at the same time.
D (disc) SKIP: Disc skip (for a CD player equipped with a multi-disc changer)
SELECT: Changes the settings of the FUNCTION buttons.

4 SYSTEM/TV mode switch

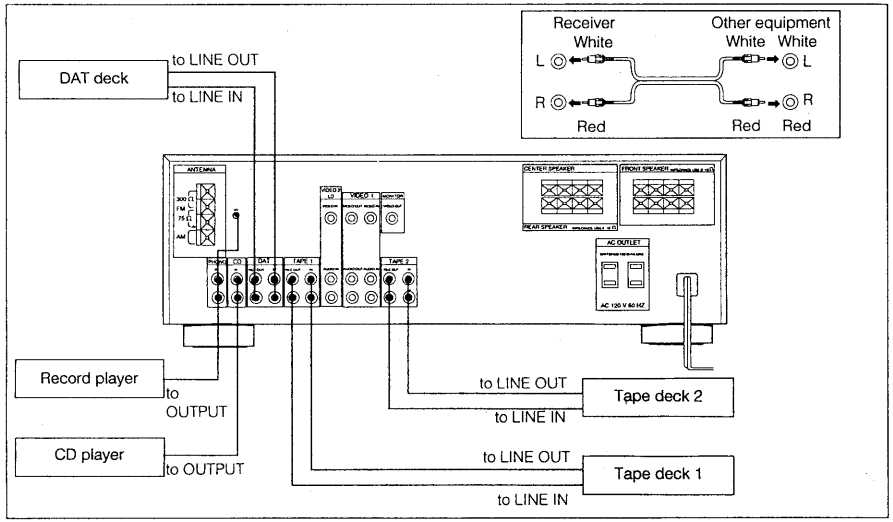
In TV mode (When setting the SYSTEM/TV selector to TV.)
Only MUTING, MASTER VOL +/– and the operative buttons in TV section on the list described on the next page can be used.

Hooking Up the System

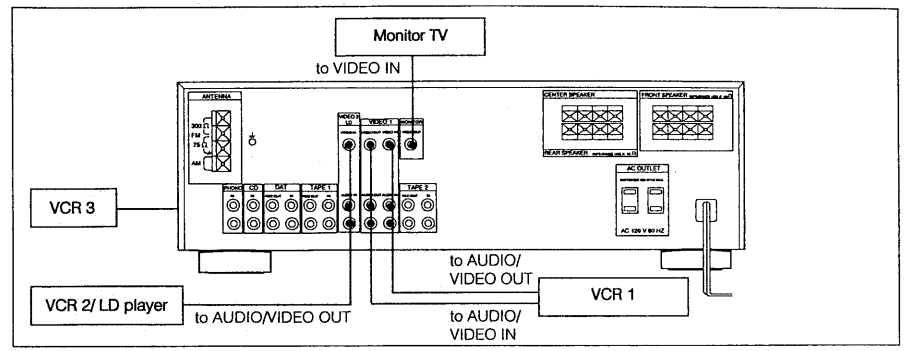
At first, this section describes about the connection with the other equipments, the antenna connection, speaker connection and then the AC power connection.

- Do not connect the power cord to an AC outlet nor press the POWER switch before accomplishing all other connections.
- The cable connectors should be fully inserted into the jacks. Loose connection may cause hum and noise.
- Jacks and plugs of the connecting cord are color-coded as follows:
  Red jacks and plugs: For the right channel of audio signals
  White jacks and plugs: For the left channel of audio signals
  Yellow jacks and plugs: For video signals

Connecting Audio Equipment

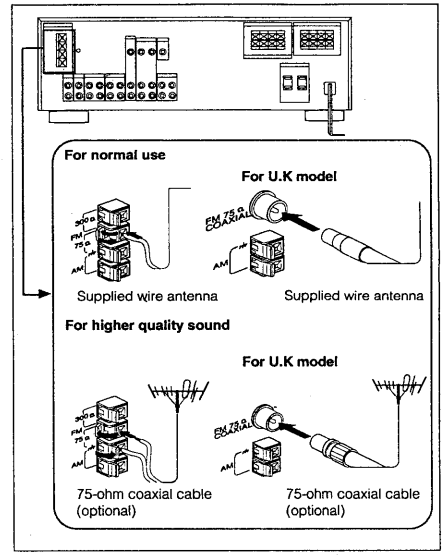


Connecting Video Equipment



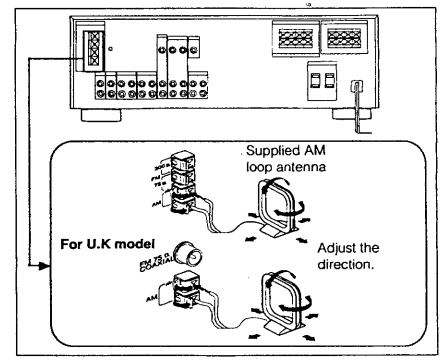
Connecting an FM Antenna

Though the ribbon antenna is supplied with this unit, the higher quality sound will be obtained with the 75-ohm coaxial cable.



Connecting an AM Antenna

The AM broadcast is enough received with the supplied AM loop antenna. However, the connection of insulated wire is also available for areas with difficult AM reception.



For areas with difficult AM reception
In areas with troubled reception, connect a 6 to 15-meter (20 to 50-foot) insulated wire to the AM antenna terminal. Extend this out of doors if possible, keeping the greater portion horizontal.
(There is no need to disconnect the supplied antenna.)

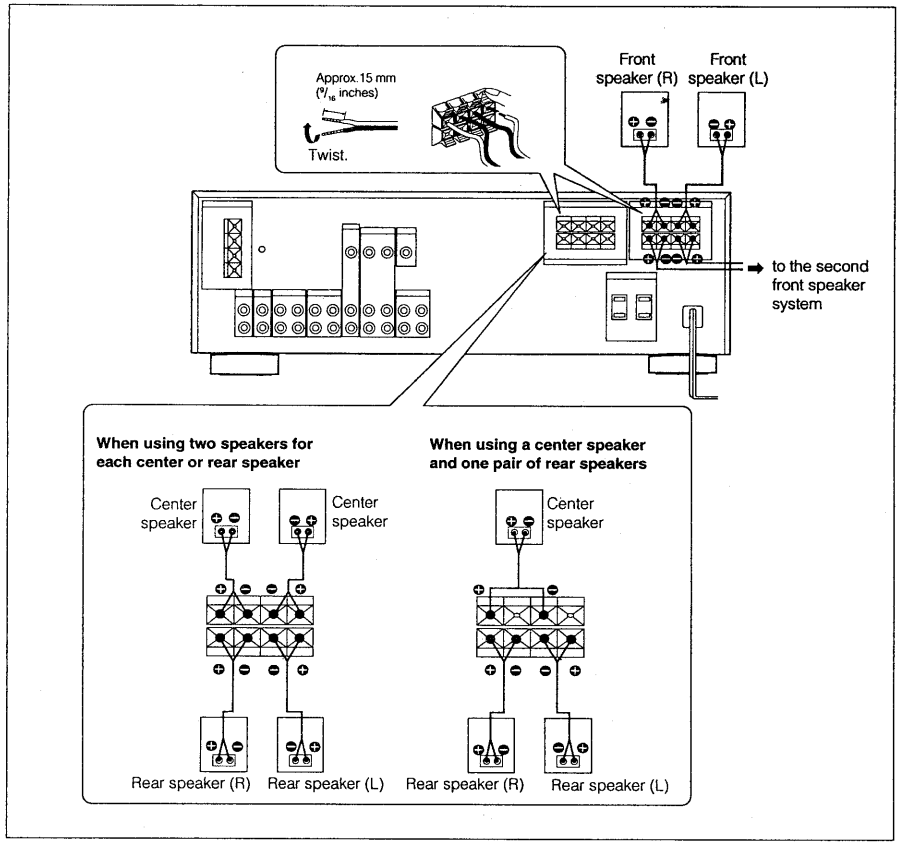
Connecting the Antenna Ground

To prevent hum, connect the ground wire to ANTENNA ground terminal (⏚).
When an outdoor antenna is installed, be sure to connect the ground wire for lightning protection.

Hooking Up the System

Connecting Speaker Systems

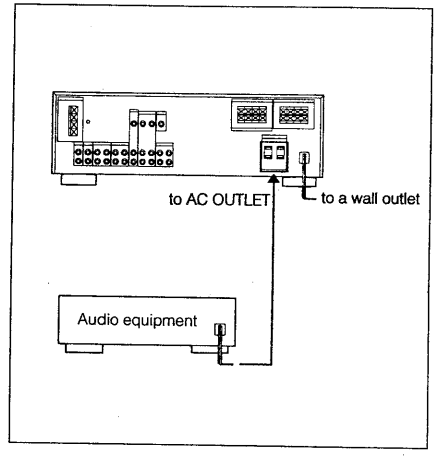
Front, rear and center speakers can be connected to this unit.



Speaker impedance and power capability
This receiver is designed to work best with speakers having nominal impedance from 8 to 16 ohms. Be sure to use a speaker system with adequate nominal impedance and power handling capabilities.
When using two center speakers, use the speakers having nominal impedance from 4 to 16 ohms.

Note
When connecting the speaker cord to the speaker terminal, make sure that the polarity (+ and –) of the speaker cord is correct. If the polarity is reversed at either speaker, the sound will be distorted and will lack bass.

Connect the AC power cord to the wall outlet last of all.
By connecting the power cord of the other audio equipment to SWITCHED AC OUTLET, this unit can supply the power source to the other audio equipment.



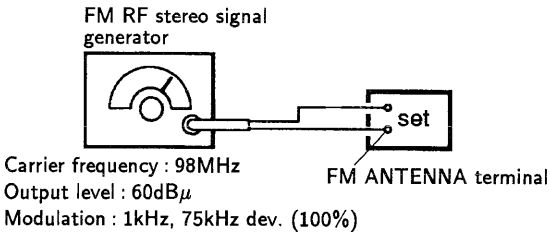
Caution
Be careful that the total power consumption of each equipment connected to the outlets on the receiver does not exceed 120 watts.
Do not connect electrical home appliances such as an electric iron, fan, TV, or other high-wattage equipment to these outlets.

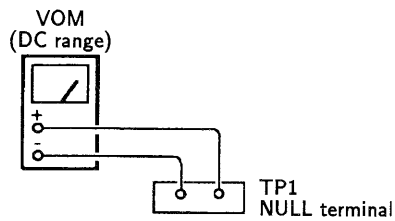
SECTION 2
ELECTRICAL ADJUSTMENTS

FM SECTION ADJUSTMENTS

· FM Discriminator (NULL) Adjustment

Setting :





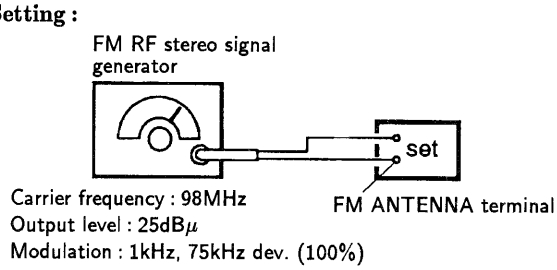
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator adjustment.

· FM Tuning Level Adjustment

Setting :

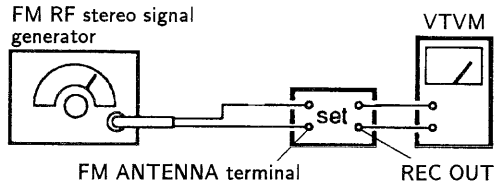


Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the STEREO LED goes on.

· FM Stereo Separation Adjustment

Setting :



Carrier frequency : 98MHz
Output level : 60dBμ
Modulation :
Audio (1kHz) : 33.75kHz dev. (45%)
Pilot (19kHz) : 7.5kHz dev. (10%)
Sub-channel (38kHz) : 33.75kHz dev. (45%)

Procedure :

Tune the set to 98MHz.

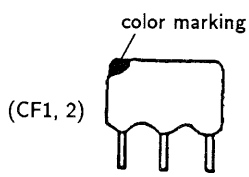
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

L-CH Stereo separation : Ⓐ - Ⓑ
R-CH Stereo separation : Ⓒ - Ⓓ

The separations of both channels should be equal.

Note on Ceramic Filter (CF1, 2) Replacement.

This set employs two ceramic filters (CF1, 2) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by (*A, *B) connection is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.

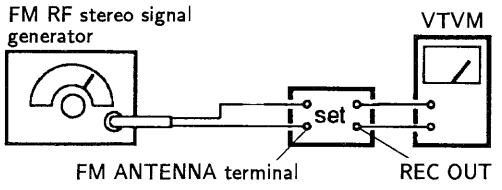


○ : connect
× : not connect

Ceramic filter		Connection		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	*A (D133)	*B (D134)	
White	10.750	○	×	10.750
Red	10.700	○	○	10.700
Black	10.650	×	○	10.650

· Auto Stop Level Adjustment

Setting :



Carrier frequency : 98MHz
Output level : 45dBμ

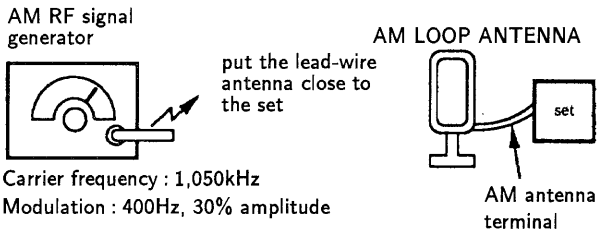
Procedure :

1. Tune the High/Low select switch to high.
2. Adjust RV25 so that the TUNED LED goes on.

AM SECTION ADJUSTMENTS

· AM Stop Level Adjustment

Setting :

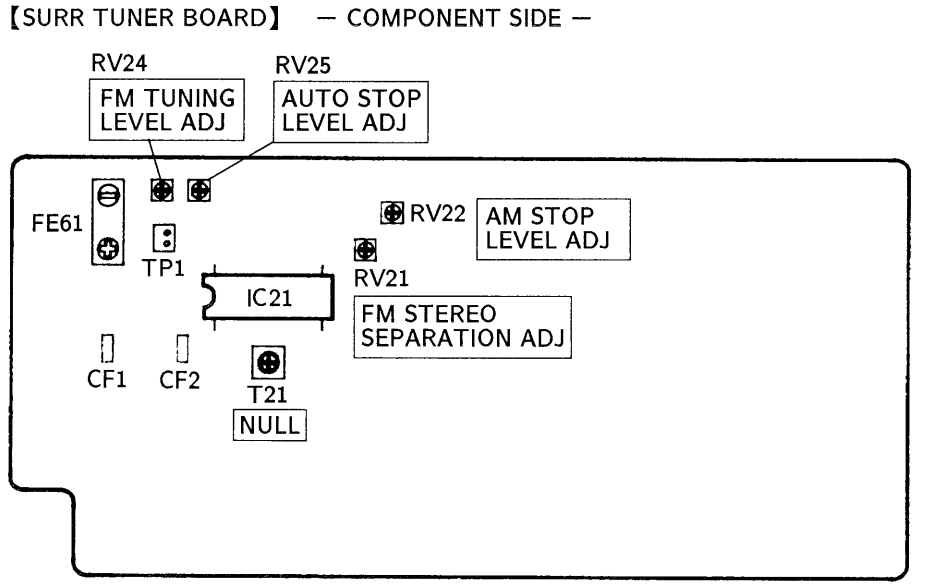


Carrier frequency : 1,050kHz
Modulation : 400Hz, 30% amplitude

Procedure :

1. Tune the set to 1,050kHz.
2. Adjust RV22 so that the TUNED LED goes on.

Adjustment Location :



SECTION 3
IC PIN DESCRIPTION

EXPLANATION OF IC202 (uPD75517GF-110-3B9) SYSTEM CONTROL

PIN NO.	SIGNAL NAME	DESCRIPTION	I /O	ACTIVE
1	POWER IN	MAIN/DRLC POWER	I	–
2	A/D VREF	A/D REFERENCE POWER SUPPLY	–	–
3	VDD	+5V POWER SUPPLY	–	–
4	VDD	+5V POWER SUPPLY	–	–
5	T.LEVEL	TUNING LEVEL SELECT	O	H
6	T.MUTE	TUNER MUTING	O	H
7	T.CE	TONE SERIAL DATA	O	L
8	LED TONE	CURSOL MODE LED OUTPUT (TONE)	O	L
9	DBFB	DBFB ON/OFF	O	L
10	K/O-C	KEY OUT CONTROL A2	O	H
11	K/O-B	KEY OUT CONTROL A1	O	H
12	K/O-A	KEY OUT CONTROL A0	O	H
13	TAPE2	TAPE2 MONITOR ON/OFF	O	H
14	K/I-C	KEY IN CONTROL A2	O	H
15	K/I-B	KEY IN CONTROL A1	O	H
16	K/I-A	KEY IN CONTROL A0	O	H
17	KEY-IN	KEY INPUT	I	H
18	FLS.DATA	FL DRIVER SERIAL DATA	O	H
19	FLS.CLOCK	FL DRIVER SERIAL CLOCK	O	H
20	LED SUR	CURSOL MODE LED OUTPUT (SURR)	O	H
21	VOL –	VOLUME DOWN	O	H
22	VOL +	VOLUME UP	O	H
23	FL.LS	FL DRIVER LATCH	O	H
24	FL.CL	FL DRIVER CLEAR	O	L
25	P.L1	PROLOGIC CONTROL	O	H
26	LED INDEX	CURSOL MODE LED OUTPUT (INDEX)	O	H
27	SURR.RY	SURROUND OUT RELAY	O	H
28	CENTER RY	CENTER OUT RELAY	O	H
29	SAME	NOT IN USED	O	H
30	SUB/SURR	NOT IN USED	O	H
31	SUB. MUTE	NOT IN USED	O	L
32	LED VOL	MASTER VOLUME LED OUTPUT	O	L
33	GND	GND	–	–
34	VIDEO A	VIDEO CONTROL A	O	H
35	VIDEO B	VIDEO CONTROL B	O	H
36	VIDEO C	VIDEO CONTROL C	O	H
37	SUB.RY	NOT IN USED	O	H
38	P.RY	POWER OUT RELAY	O	H
39	S.RY	SPEAKER RELAY	O	H
40	S.CLOCK	SERIAL CLOCK	O	H

PIN NO.	SIGNAL NAME	DESCRIPTION	I /O	ACTIVE
41	S.DATA	SERIAL DATA	O	H
42	S.CE	SERIAL LATCH	O	H
43	F.MUT	FUNCTION MUTING	O	L
44	−20dB MUT	−20dB MUTING	O	L
45	P.MUT	PROTECTOR MUTING	O	L
46	STEREO IN	TUNER STEREO SIGNAL INPUT	I	L
47	PROTE IN	PROTECTOR INPUT	I	L
48	RM-2	REMOCON SUB INPUT	I	L
49	RM-1	REMOCON MAIN INPUT	I	L
50	A.CE	AUTOMATIC GAUGE LATCH	I	L
51	T-A.S	TUNER AUTO STOP	I	L
52	IF-DIN	IF COUNT DATA INPUT	I	H
53	STOP	POWER OFF DET	I	L
54	GND	GND	—	—
55	XT-1	GND	—	—
56	XT-2	NOT IN USED	—	—
57	IC	NOT IN USED	—	—
58	OSC	4.19MHz CERAMIC	—	—
59	OSC	4.19MHz CERAMIC	—	—
60	RES	POWER ON RESET	I	L
61	D.CE	DIGITAL DELAY LATCH	O	L
62	SURR-A	SURROUND MODE SELECT A	O	H
63	SURR-B	SURROUND MODE SELECT B	O	H
64	SURR-C	SURROUND MODE SELECT C	O	H
65	SURR-D	SURROUND MODE SELECT D	O	H
66	P.L6	PROLOGIC CONTROL	O	H
67	P.L2	PROLOGIC CONTROL	O	H
68	P.L3	PROLOGIC CONTROL	O	H
69	P.L4	PROLOGIC CONTROL	O	H
70	P.L5	PROLOGIC CONTROL	O	H
71	LED DRLC	NOT IN USED	O	—
72	S.CONT	RM-2 CONTROL	O	H
73	AVSS	ANALOG GND	—	—
74	S-IN	SPEANA INPUT (R-CH)	I	—
75	A/D I ch6	GND	I	—
76	A/D I ch5	GND	I	—
77	A/D I ch4	GND	I	—
78	S-IN	SPEANA INPUT (L-CH)	I	—
79	A/D I ch2	GND	I	—
80	A/D I ch1	GND	I	—

SECTION 4
DIAGRAMS

Note on Printed Wiring Board:

- ○——○ : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ⊡ : indicates side identified with part number.
- ▨ : Pattern on the side which is seen.

Note on Schematic Diagram:

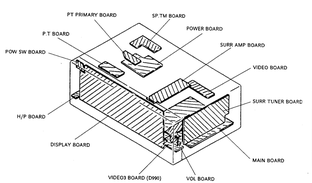
- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- ⚠ : internal component.
- ⚠ : nonflammable resistor.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

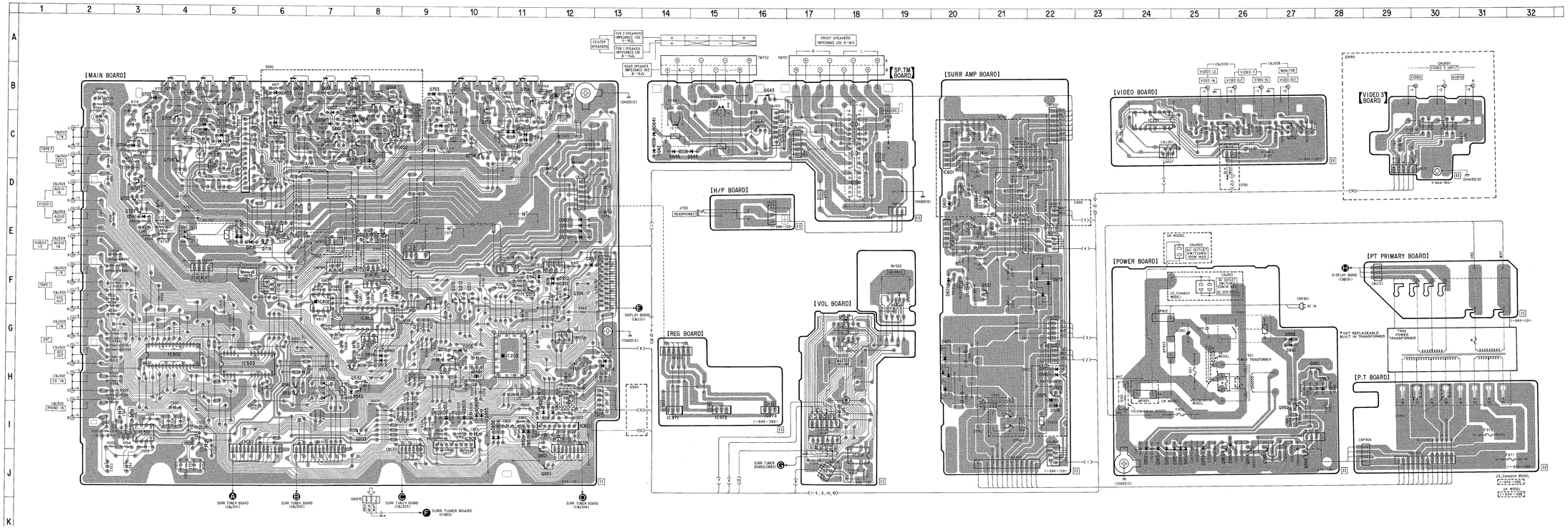
Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- ○——○ : B+ line.
- ○▨▨○ : B– line.
- ○[ ]○ : adjustment for repair.
- AC voltage readings in the bias oscillator with a VTVM.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM. (Input impedance 10MΩ) Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⇨ : SURROUND REAR
  ⇨ : SURROUND CENTER

• Circuit Boards Location



4-1. PRINTED WIRING BOARDS (MAIN SECTION) • See page 14 for note. • See page 19 for semiconductor location. • See page 42 for semiconductor lead layouts.



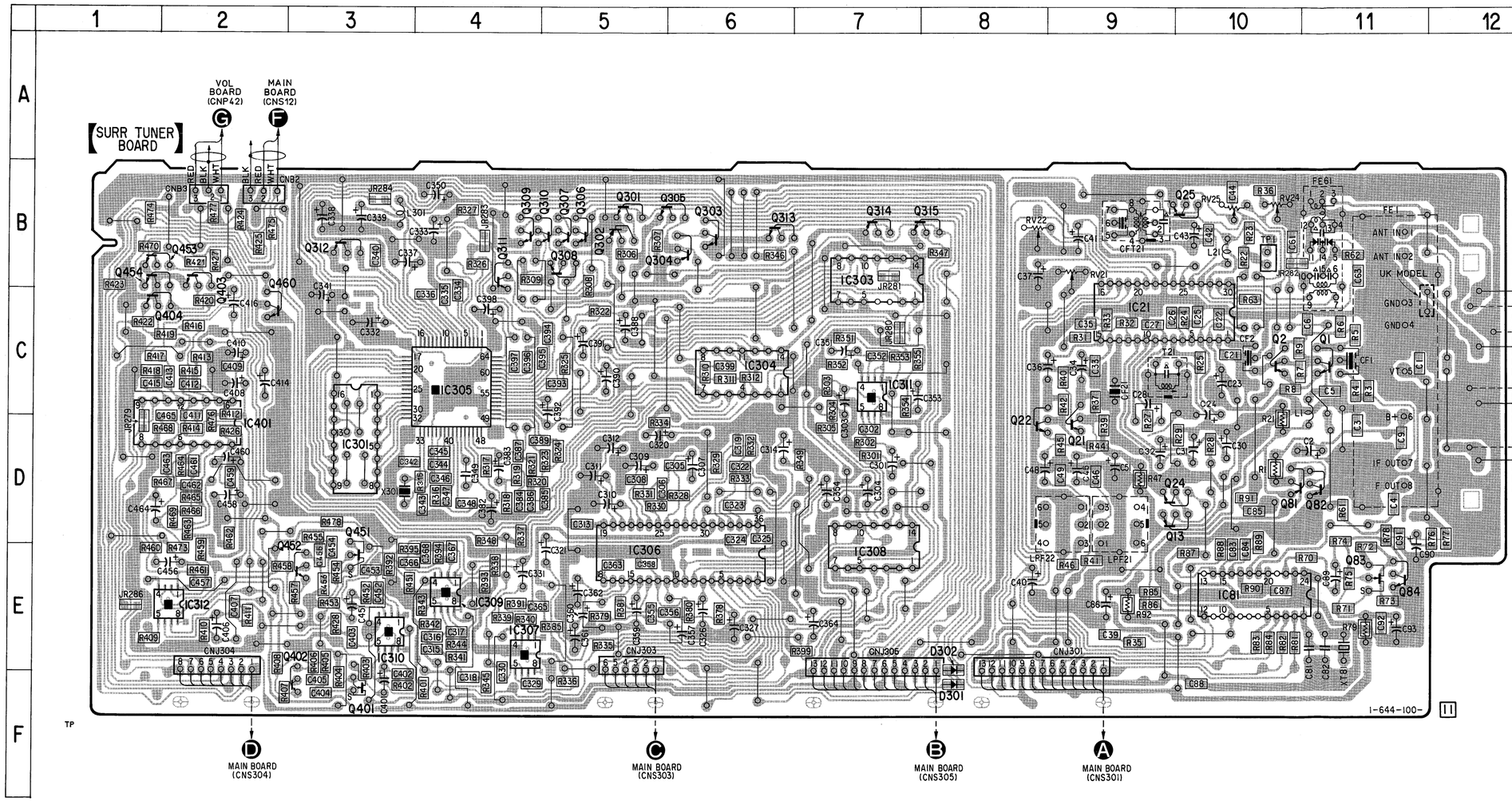
• Semiconductor Location (Main Section)

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
0202	H-13	0951	I-24	0532	H-8
0203	F-12	0952	I-24	0581	H-6
0204	H-13	0953	I-24	0601	D-21
0205	G-10	0954	I-25	0605	C-6
0540	H-7	0955	I-25	0621	F-21
0541	E-3	0956	I-25	0641	C-16
0542	F-11	0957	H-28	0643	C-16
0601	D-20	0958	G-27	0651	B-8
0621	F-20	0960	I-26	0652	C-8
0641	C-14	0961	G-27	0653	C-8
0642	C-14	0971	H-20	0654	C-7
0645	C-15	0973	F-22	0655	B-7
0646	C-14	0974	B-12	0656	B-8
0651	B-9	0975	H-22	0658	B-6
0652	C-6	0976	I-22	0659	B-8
0653	B-6	0977	H-22	0660	B-8
0654	C-8	0978	E-12	0661	C-7
0655	C-7	0979	E-12	0662	C-7
0656	C-8	0980	E-12	0663	C-8
0657	B-7	0981	E-12	0701	B-4
0658	C-7	0982	H-22	0703	C-4
0703	B-3			0704	B-5
0704	C-3	IC201	J-18	0705	B-4
0705	E-5	IC202	C-24	0706	B-5
0706	E-5	IC251	H-11	0707	C-3
0707	E-5	IC501	I-3	0708	C-4
0708	C-5	IC502	H-4	0719	E-6
0709	C-5	IC503	H-5	0721	D-3
0710	C-4	IC601	C-20	0722	D-3
0711	C-4	IC621	E-20	0723	E-3
0753	B-9	IC701	C-5	0751	B-10
0754	C-9	IC801	I-12	0753	B-10
0758	C-11	IC802	F-7	0754	B-11
0759	C-11	IC803	G-8	0755	B-10
0760	C-11	IC804	I-10	0756	B-11
0761	C-11	IC971	I-14	0757	B-10
0801	I-12	IC972	I-15	0758	C-10
0802	I-11	IC973	I-16	0801	I-11
0803	I-10			0850	F-9
0805	I-10	Q201	H-10	0851	J-12
0806	I-11	Q202	H-9	0950	H-8
0814	H-8	Q203	I-8	0951	H-27
0815	H-8	Q210	F-10	0952	I-27
0851	I-11	Q211	F-10	0953	I-26
0852	I-11	Q212	F-10	0954	I-26
0853	I-9	Q213	F-11	0955	I-26
0855	I-10	Q214	F-12	0956	J-27
0856	I-10	Q251	C-26	0971	B-13
0910	F-12	Q252	C-27	0972	H-22
0911	F-12	Q531	H-6		

【SURR TUNER BOARD】

*	US Canadian MODEL	UK MODEL
R22	8.2K	22K
C35	0.0082μ	0.0068μ
C35	0.0082μ	0.0068μ

4-4. PRINTED WIRING BOARDS (SURR TUNER SECTION) • See page 14 for notes. • See page 42 for Semicondcutor Lead Layouts.



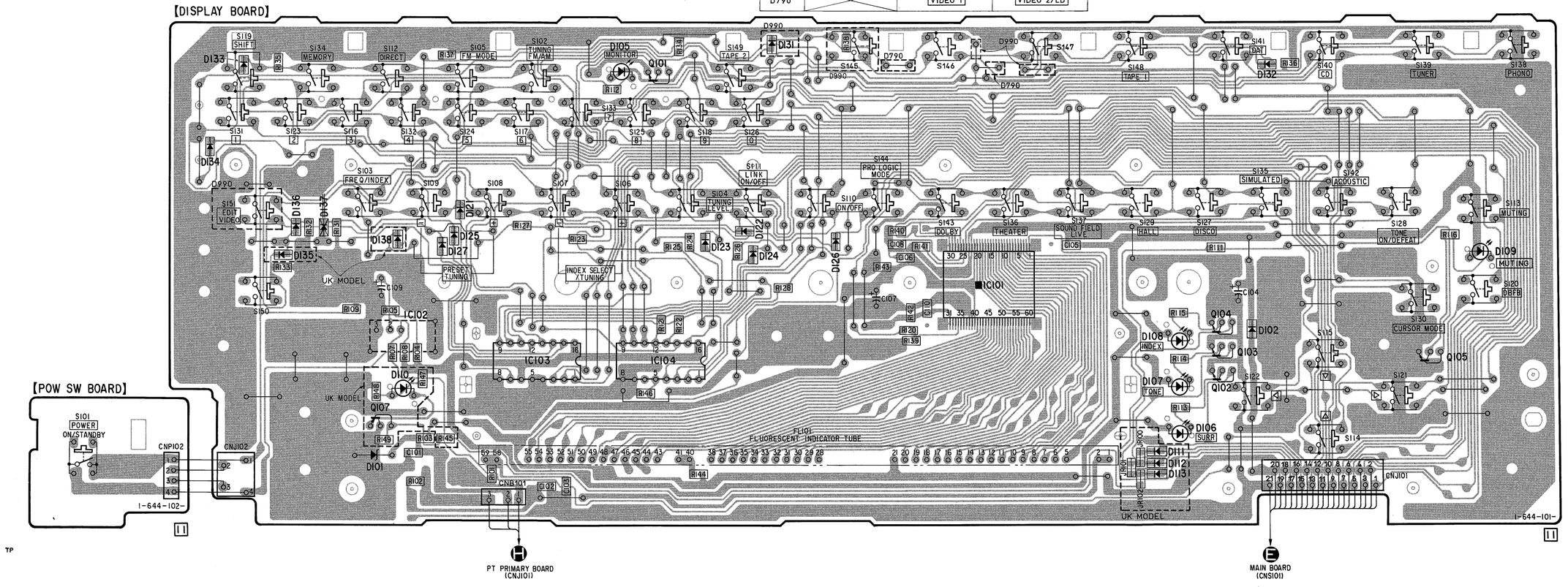
• Semiconductor Location (Surr Tuner Section)

Ref. No.	Location
D301	F-8
D302	E-8
IC21	C-9
IC81	E-10
IC301	D-3
IC303	B-7
IC304	C-6
IC305	C-4
IC306	E-5
IC307	E-4
IC308	E-7
IC309	E-4
IC310	E-3
IC311	C-7
IC312	E-2
IC401	D-2
Q1	C-11
Q2	C-10
Q13	D-9
Q21	D-9
Q22	D-8
Q24	D-9
Q25	B-10
Q81	D-10
Q82	D-11
Q83	E-11
Q84	E-11
Q301	B-5
Q302	B-5
Q303	B-6
Q304	B-6
Q305	B-6
Q306	B-5
Q307	B-5
Q308	B-5
Q309	B-4
Q310	B-4
Q311	B-4
Q312	B-3
Q313	B-6
Q314	B-7
Q315	B-8
Q401	F-3
Q402	F-3
Q403	B-2
Q404	C-1
Q451	E-3
Q452	E-3
Q453	B-1
Q454	B-1
Q460	C-2

4-5. PRINTED WIRING BOARDS (DISPLAY SECTION)

• See page 14 for notes. • See page 42 for Semiconductor Lead Layouts.

	S145	S146	S147
D990	VIDEO 1	VIDEO 2/LD	VIDEO 3
D790		VIDEO 1	VIDEO 2/LD

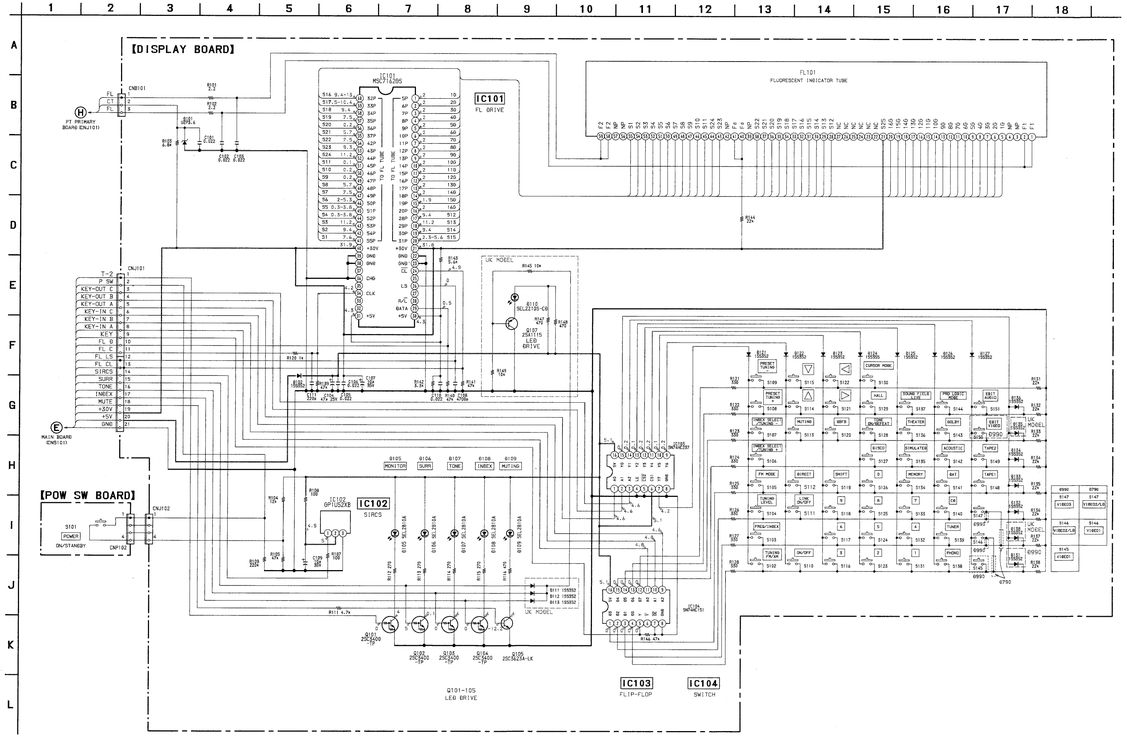


• Semicondcutor Location (Display Section)

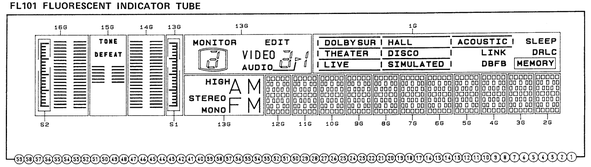
Ref. No.	Location
D101	F-4
D102	D-13
D105	B-7
D106	E-12
D107	E-12
D108	D-12
D109	D-15
D110	E-4
D111	F-12
D112	F-12
D113	F-12
D121	C-5
D122	C-8
D123	D-7
D124	D-8
D125	D-5
D126	D-9
D127	D-5
D131	B-8
D132	B-13
D133	B-3
D134	C-3
D135	D-3
D136	C-3
D137	C-4
D138	D-4
IC101	D-10
IC102	D-4
IC103	E-6
IC104	E-7
Q101	B-7
Q102	E-12
Q103	E-12
Q104	D-12
Q105	E-14
Q107	E-4

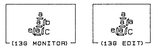
4-6. SCHEMATIC DIAGRAM (DISPLAY SECTION)

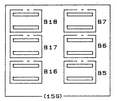
● See page 14 for notes. ● See page 41 for IC Block Diagrams.

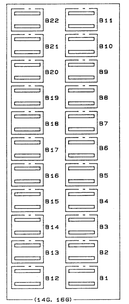


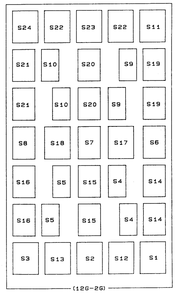
FL101 FLUORESCENT INDICATOR TUBE









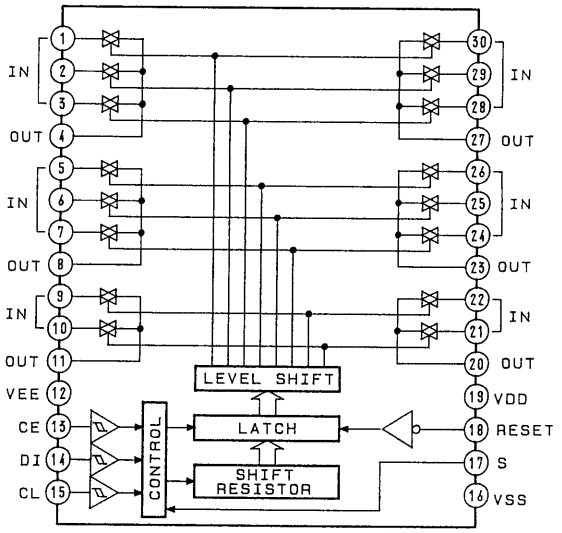


	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	B1	–	B1	–	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	SLEEP
P2	B2	–	B2	–	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	DRLC
P3	B3	–	B3	–	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	MEMORY
P4	B4	–	B4	–	S4	S4	S4	S4	S4	S4	S4	S4	S4	S4	S4	(DISCO)‖
P5	B5	B5	B5	–	S5	S5	S5	S5	S5	S5	S5	S5	S5	S5	S5	‖ (DISCO)
P6	B6	B6	B6	–	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6	‖ (SIMULATED)
P7	B7	B7	B7	–	S7	S7	S7	S7	S7	S7	S7	S7	S7	S7	S7	‖ (LIVE)
P8	B8	–	B8	–	S8	S8	S8	S8	S8	S8	S8	S8	S8	S8	S8	(THEATER)
P9	B9	–	B9	–	S9	S9	S9	S9	S9	S9	S9	S9	S9	S9	S9	‖ (HALL)
P10	B10	–	B10	–	S10	S10	S10	S10	S10	S10	S10	S10	S10	S10	S10	‖ (ACOUSTIC)
P11	B11	–	B11	–	S11	S11	S11	S11	S11	S11	S11	S11	S11	S11	S11	–
P12	B12	–	B12	c (EDIT)	S12	S12	S12	S12	S12	S12	S12	S12	S12	S12	S12	(HALL)
P13	B13	–	B13	e (EDIT)	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13	LINK
P14	B14	–	B14	AUDIO ⁄	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	DBFB
P15	B15	–	B15	a (MONITOR)	S15	S15	S15	S15	S15	S15	S15	S15	S15	S15	S15	(DISCO)
P16	B16	B16	B16	b (MONITOR)	S16	S16	S16	S16	S16	S16	S16	S16	S16	S16	S16	(THEATER)
P17	B17	B17	B17	c (MONITOR)	S17	S17	S17	S17	S17	S17	S17	S17	S17	S17	S17	(SIMULATED)‖
P18	B18	B18	B18	e (MONITOR)	S18	S18	S18	S18	S18	S18	S18	S18	S18	S18	S18	‖ (THEATER)
P19	B19	–	B19	MONO	S19	S19	S19	S19	S19	S19	S19	S19	S19	S19	S19	‖ (DOLBY SUR)
P20	B20	–	B20	STEREO	S20	S20	S20	S20	S20	S20	S20	S20	S20	S20	S20	(HALL)
P21	B21	–	B21	HIGH	S21	S21	S21	S21	S21	S21	S21	S21	S21	S21	S21	(ACOUSTIC)
P22	B22	–	B22	AM	S22	S22	S22	S22	S22	S22	S22	S22	S22	S22	S22	–
P23	–	–	–	FM	S23	S23	S23	S23	S23	S23	S23	S23	S23	S23	S23	–
P24	S2	TONE DEFEAT	–	S1	S24	S24	S24	S24	S24	S24	S24	S24	S24	S24	S24	–
P25	–	–	–	MONITOR ▢ EDIT ⌀ ▷ ‖ VIDEO	–	–	–	–	–	–	–	–	–	–	–	DOLBY SUR HALL THEATER DISC LIVE SIMULATED ACOUSTIC

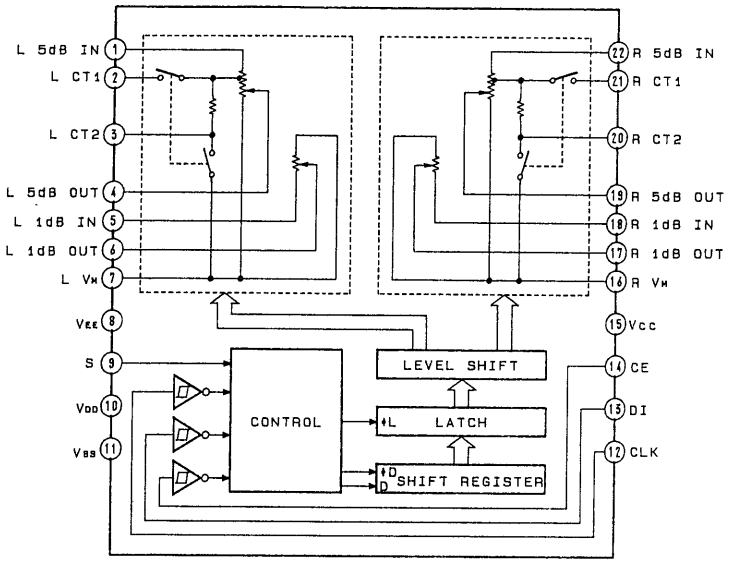
4-7. IC BLOCK DIAGRAMS

- **Main Section IC Block Diagrams.**

IC503 LC7822

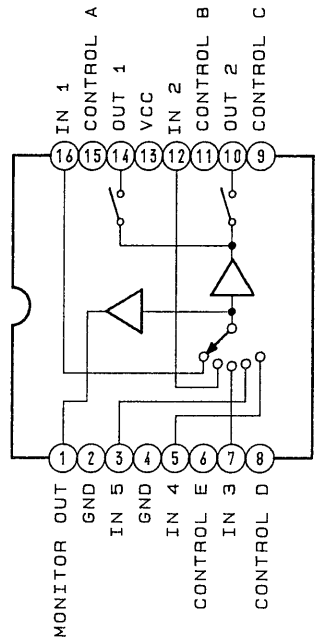


IC803 LC7535

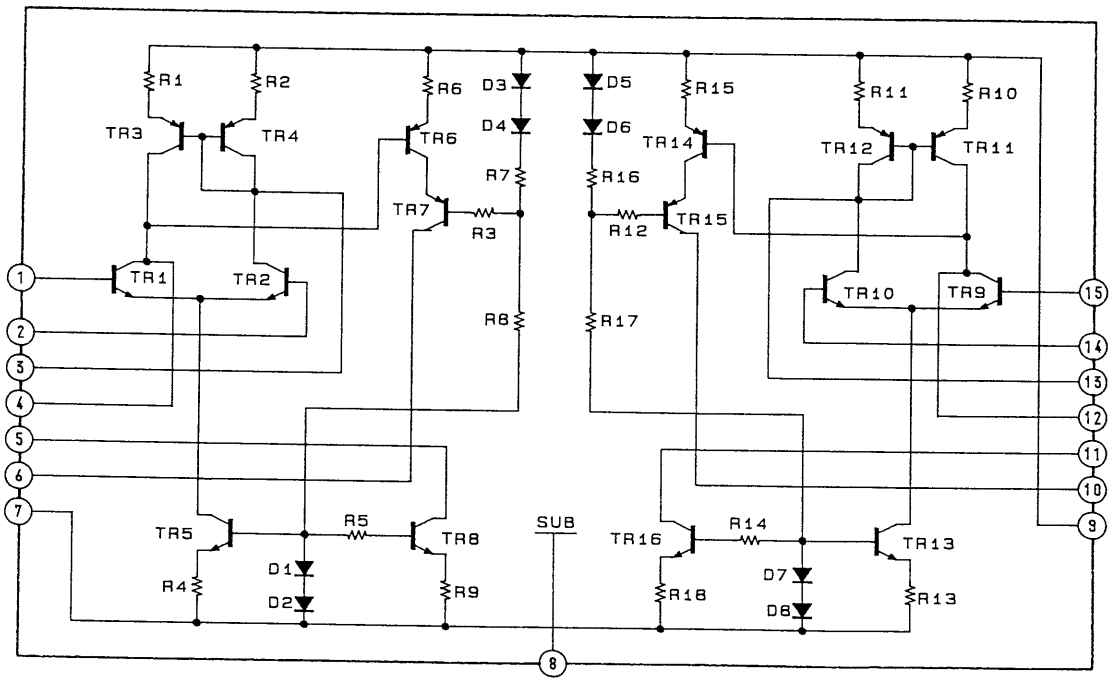


- **Video Section IC Blcok Diagrams.**

IC251 BA7625

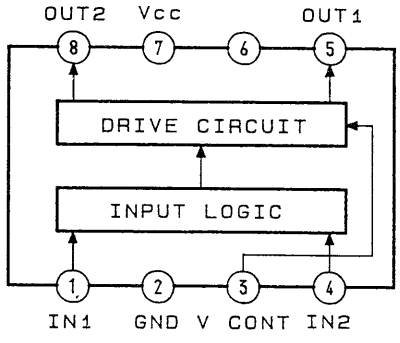


IC701 STK3102MK3



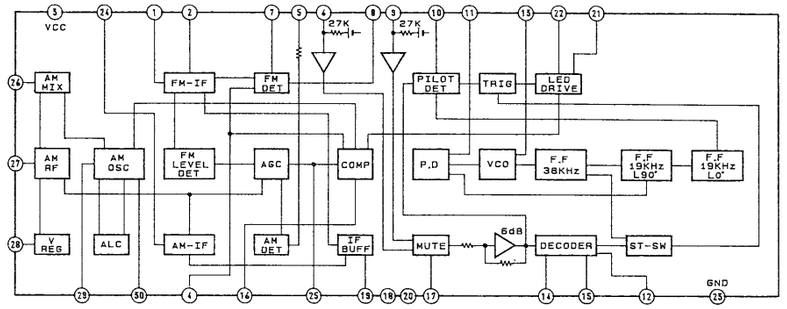
- **Vol Section IC Block Diagrams.**

IC201 LB1639

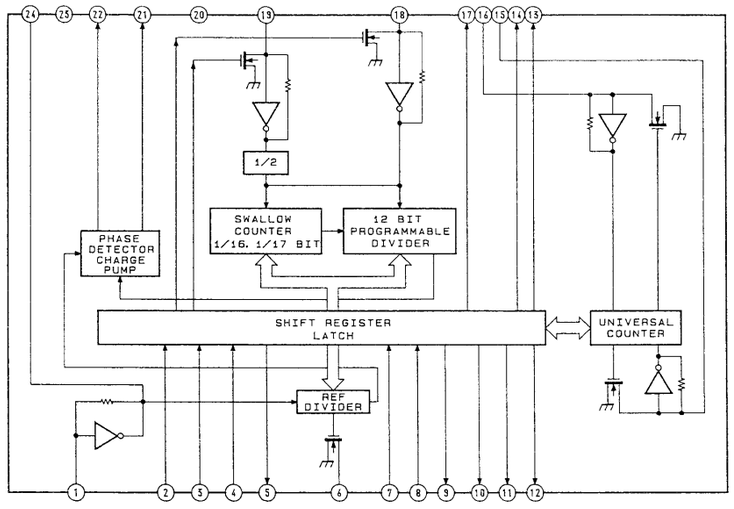


- **Surr Tuner Section IC Block Diagrams.**

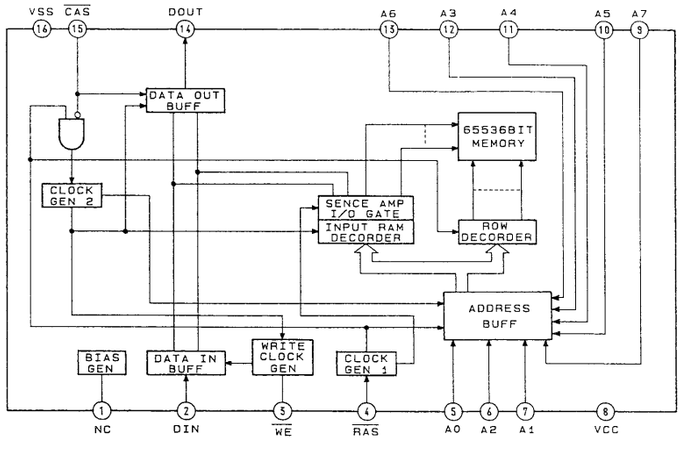
IC21 LA1851N



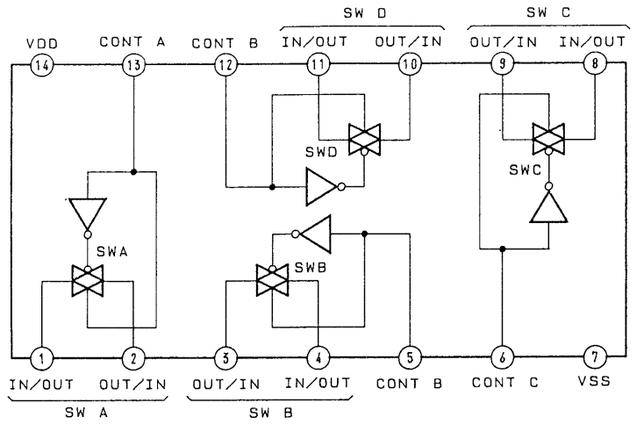
IC81 LC7218



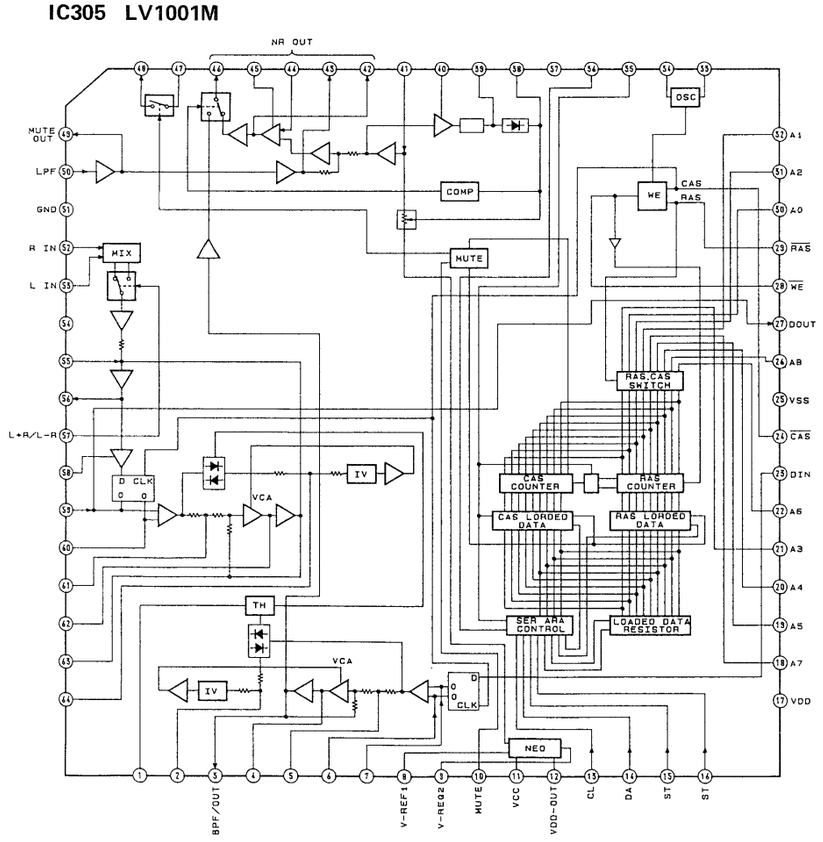
IC301 LM3364K-15



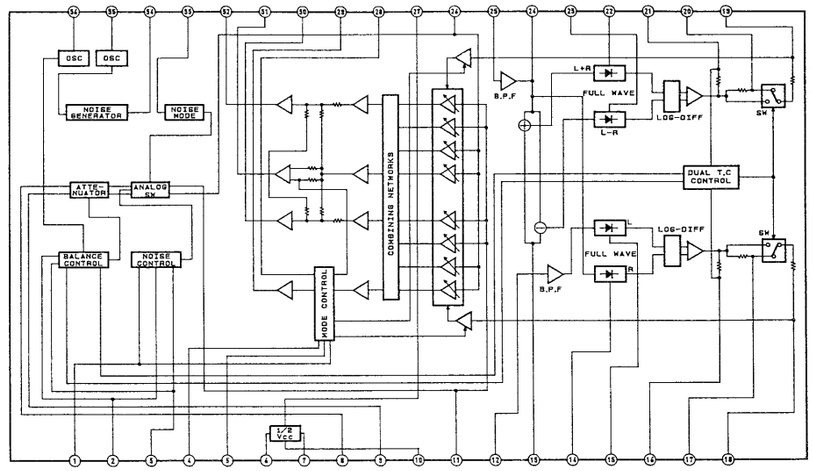
IC303, 304, 308 LC4966



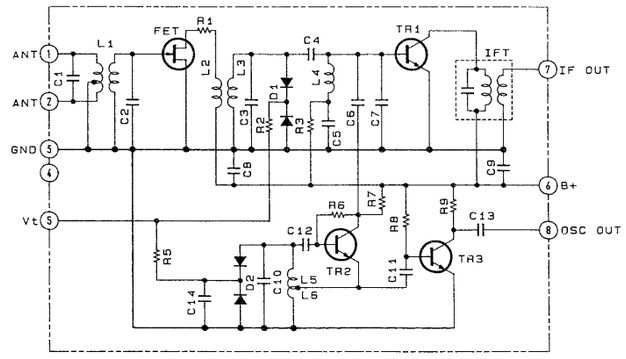
IC305 LV1001M



IC306 LA2780

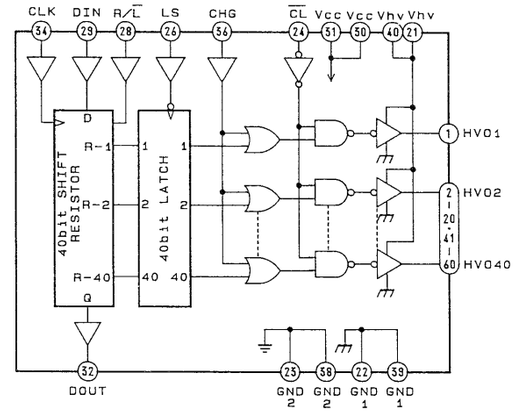


FE1 FRONT-END



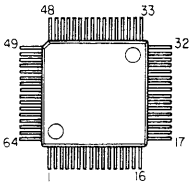
- **Display Section IC Block Diagrams**

IC101 MSC7162



4-8. SEMICONDCUTOR LEAD LAYOUTS

LV1001M



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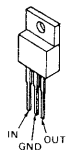
M5F78M12L



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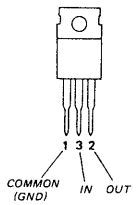
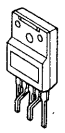


SI-18752N



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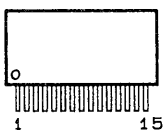

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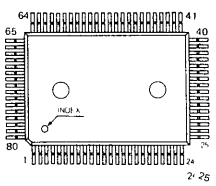

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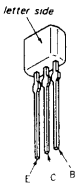
2SC2785-FEK
2SC3113-AB
2SC3623A-LK



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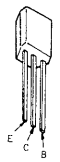

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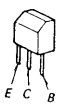

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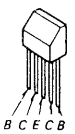

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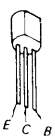

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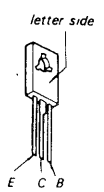

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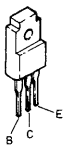

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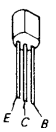

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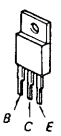

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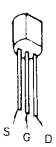
2SK246-Y



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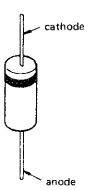
UZP-3.6B



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HZS6C3L
HZS30-3L
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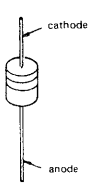
11ES2



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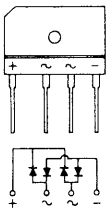
RBV-602-01



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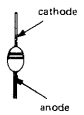

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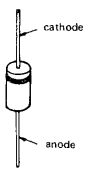

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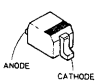

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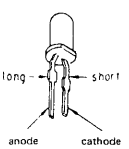

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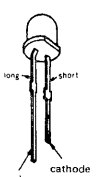


SECTION 5 EXPLODED VIEWS

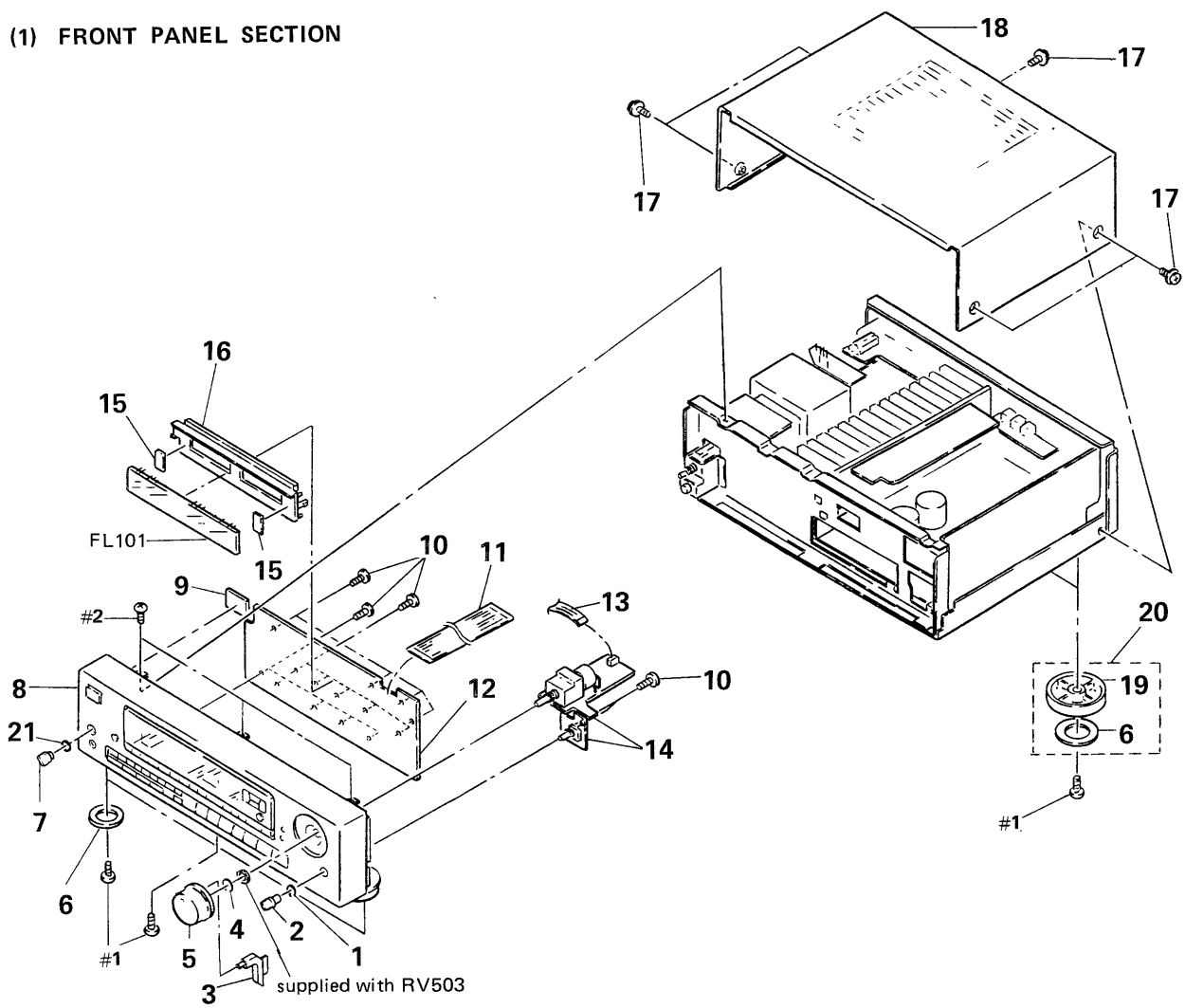
NOTE:

- -XX,-X mean standardized parts, so they may have some difference from the original one.
- Color indication of Appearance Parts.
  Example:
  KNOB,BALANCE (WHITE) . . . (RED)
  ↑ Parts Color
  ↑ Cabinet's Color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

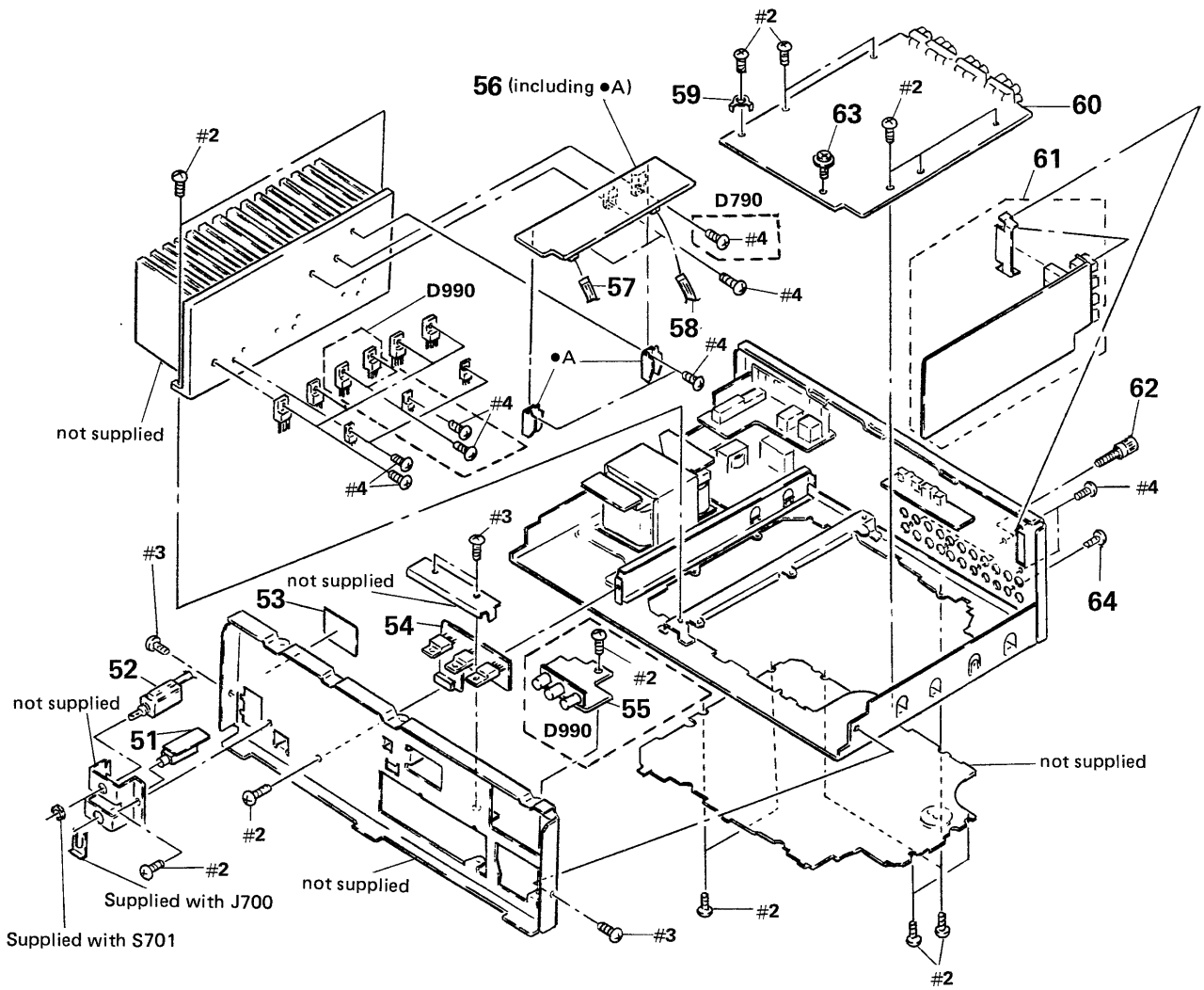
(1) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	3-356-957-11	SPRING	
2	4-925-014-11	KNOB (DIA. 10)	
3	4-943-092-01	PLATE(VOL), LIGHT GUIDE	
4	3-350-426-01	SPRING, RING	
5	4-943-091-01	KNOB (VOL)	
6	4-923-836-11	CUSHION	
7	4-908-097-21	KNOB	
8	A-4325-683-A	PANEL ASSY, FRONT (D790:US, Canadian)	
8	A-4325-684-A	PANEL ASSY, FRONT (UK)	
8	A-4325-690-A	PANEL ASSY, FRONT (D990)	
* 9	1-644-102-11	POW SW BOARD	
10	4-951-620-01	SCREW, +BVTP (2.6X8)	
11	1-690-091-11	WIRE, FLAT TYPE (21 CORE)	

Ref. No.	Part No.	Description	Remark
* 12	A-4347-779-A	DISPLAY BOARD, COMPLETE (D790:US, Canadian)	
* 12	A-4347-780-A	DISPLAY BOARD, COMPLETE (UK)	
* 12	A-4347-806-A	DISPLAY BOARD, COMPLETE (D990)	
13	1-575-730-11	WIRE, FLAT TYPE (5 CORE)	
* 14	1-644-107-11	VOL BOARD	
* 15	4-921-941-01	CUSHION (FL)	
* 16	4-952-115-01	HOLDER (FL)	
17	3-704-366-01	SCREW (CASE) (M3X8)	
18	4-931-031-11	CASE	
19	3-318-688-51	FOOT (F58175S)	
20	X-4941-291-1	FOOT ASSY (F58175S)	
21	4-948-477-01	SPRING (8.3), RING	
FL101	1-519-742-11	INDICATOR TUBE, FLUORESCENT	

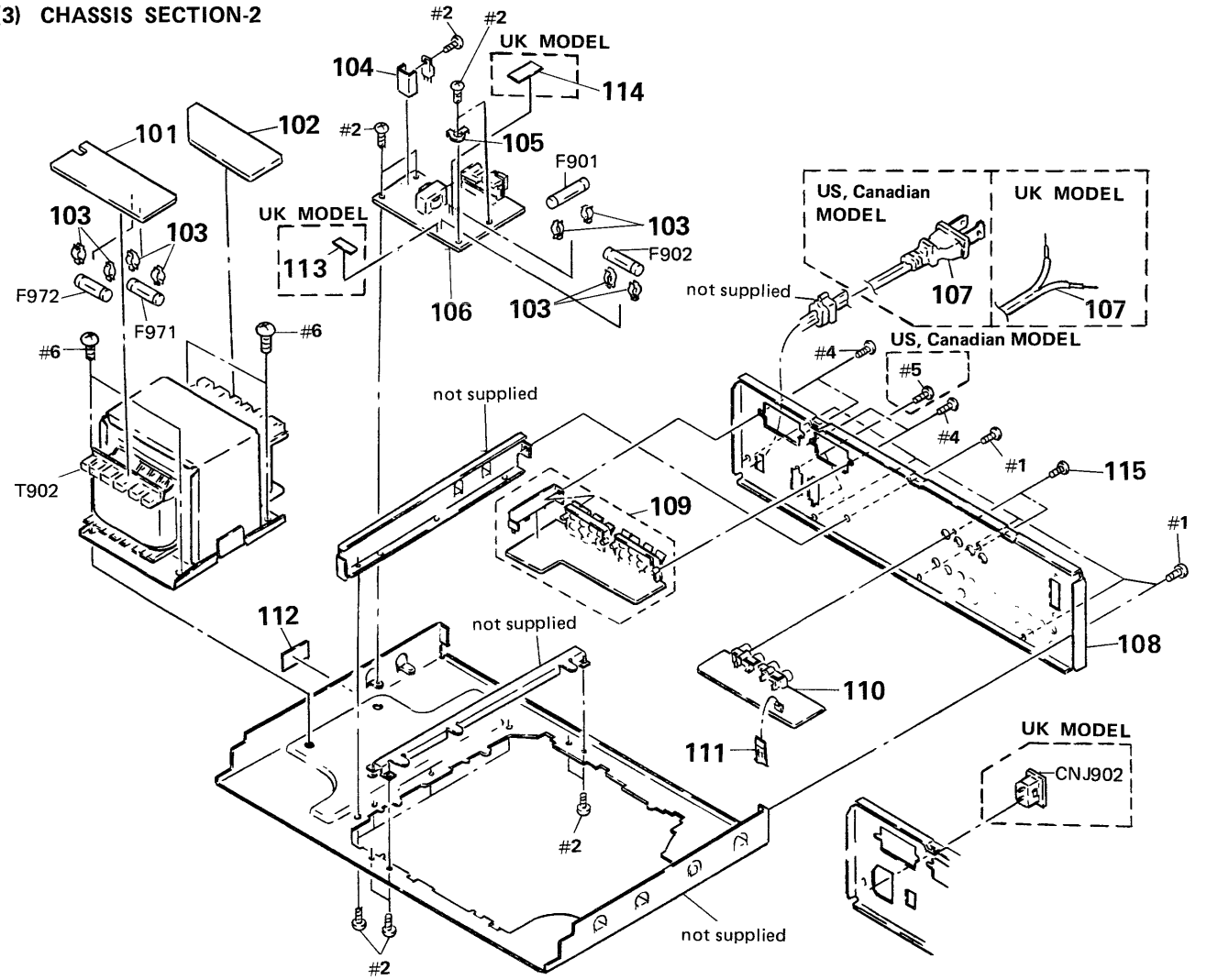
(2) CHASSIS SECTION-1



Ref. No.	Part No.	Description	Remark
* 51	1-644-103-11	H/P BOARD	
52	1-572-291-31	SWITCH, ROTARY SLIDE	
* 53	3-703-044-26	LABEL, CAUTION	
* 54	1-644-099-11	REG BOARD	
* 55	1-644-104-11	VIDEO 3 BOARD (D990)	
* 56	A-4347-782-A	SURR. AMP BOARD, COMPLETE (D790)	
* 56	A-4347-813-A	SURR. AMP BOARD, COMPLETE (D990)	
* 57	1-575-851-11	WIRE, FLAT TYPE (7 CORE)	
58	1-575-730-11	WIRE, FLAT TYPE (5 CORE)	
* 59	4-942-204-01	PLATE, GROUND	

Ref. No.	Part No.	Description	Remark
* 60	A-4347-764-A	MAIN BOARD, COMPLETE (D790)	
* 60	A-4347-801-A	MAIN BOARD, COMPLETE (D990)	
* 61	A-4347-767-A	SURR. BOARD, COMPLETE (UK)	
* 61	A-4347-805-A	SURR. BOARD, COMPLETE (US, Canadian)	
62	4-947-010-01	SCREW, FEEDER FIXED	
63	2-383-566-00	SCREW (3X8)	
64	4-909-982-01	SCREW, TAPPING	

(3) CHASSIS SECTION-2



Ref. No.	Part No.	Description	Remark
* 101	1-644-096-11	P.T BOARD (US, Canadian)	
* 101	1-644-098-11	P.T BOARD (UK)	
* 102	1-644-110-11	PT PRIMARY BOARD	
103	1-533-217-31	HOLDER, FUSE	
* 104	3-309-144-21	HEAT SINK	
* 105	4-942-204-01	PLATE, GROUND	
* 106	A-4347-788-A	POWER BOARD, COMPLETE (UK)	
* 106	A-4347-811-A	POWER BOARD, COMPLETE (US, Canadian)	
⚠107	1-575-652-11	CORD, POWER (D790:UK)	
⚠107	1-690-609-11	CORD, POWER (US, Canadian)	
* 108	4-952-099-01	PANEL, BACK (D990:US)	
* 108	4-952-099-11	PANEL, BACK (D990:Canadian)	
* 108	4-952-099-21	PANEL, BACK (D790:US)	
* 108	4-952-099-31	PANEL, BACK (D790:Canadian)	
* 108	4-952-099-41	PANEL, BACK (D790:UK)	
* 109	1-644-109-11	SP. TM BOARD	
* 110	1-644-097-11	VIDEO BOARD	
111	1-575-730-11	WIRE, FLAT TYPE (5 CORE)	

Ref. No.	Part No.	Description	Remark
* 112	3-703-044-26	LABEL, CAUTION	
* 113	3-701-947-16	LABEL (3.15A), FUSE (UK)	
* 114	3-701-948-17	LABEL (T2A), FUSE (UK)	
115	4-909-982-01	SCREW, TAPPING	
⚠CNJ902	1-526-751-00	OUTLET, AC (UK)	
⚠F901	1-532-203-00	FUSE, TIME LAG 2A 250V (D790:UK)	
⚠F901	1-576-107-11	FUSE 3.15A 125V (US, Canadian)	
⚠F902	1-532-237-00	FUSE, TIME LAG 3.15A 250V (D790:UK)	
⚠F902	1-532-748-11	FUSE, GLASS TUBE 6.3A 125V(US, Canadian)	
⚠F971	1-532-237-00	FUSE, TIME LAG 3.15A 250V (D790:UK)	
⚠F971	1-576-107-11	FUSE (US, Canadian)	
⚠F972	1-532-237-00	FUSE, TIME LAG 3.15A 250V (D790:UK)	
⚠F972	1-576-107-11	FUSE (US, Canadian)	
⚠T902	1-450-884-11	TRANSFORMER, POWER (D790:UK)	
⚠T902	1-450-885-11	TRANSFORMER, POWER (D790:US, Canadian)	
⚠T902	1-450-886-11	TRANSFORMER, POWER (D990)	

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

DISPLAY **POW SW**

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	A-4347-779-A	DISPLAY BOARD, COMPLETE (D790:US, Canadian)			
*	A-4347-780-A	DISPLAY BOARD, COMPLETE (UK)			
*	A-4347-806-A	DISPLAY BOARD, COMPLETE (D990)			
		**********			
*	1-644-102-11	POW SW BOARD			
		**********			
*	4-921-941-01	CUSHION (FL)			
*	4-952-115-01	HOLDER (FL)			
		< CAPACITOR >			
C101	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V	
C102	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V	
C103	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V	
C104	1-124-910-11	ELECT	47uF	20% 50V	
C105	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V	
C106	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V	
C107	1-126-096-11	ELECT	10uF	20% 35V	
C108	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V	
C109	1-126-096-11	ELECT	10uF	20% 35V	
C110	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V	
C111	1-163-125-00	CERAMIC CHIP	22P	5% 50V	
		< CONNECTOR >			
* CNJ101	1-568-864-11	SOCKET, CONNECTOR 21P			
* CNJ102	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P			
* CNP102	1-565-295-11	PLUG, CONNECTOR 4P			
		< DIODE >			
D101	8-719-014-25	DIODE	UZP-3.6B		
D102	8-719-988-62	DIODE	1SS355		
D105	8-719-301-52	LED	SEL2810A-C(MONITOR)		
D106	8-719-301-52	LED	SEL2810A-C(SURR)		
D107	8-719-301-52	LED	SEL2810A-C(TONE)		
D108	8-719-301-52	LED	SEL2810A-C(INDEX)		
D109	8-719-301-52	LED	SEL2810A-C(MUTING)		
D110	8-719-301-37	LED	SEL2210S-CD(UK)		
D111	8-719-988-62	DIODE	1SS355 (UK)		
D112	8-719-988-62	DIODE	1SS355 (UK)		
D113	8-719-988-62	DIODE	1SS355 (UK)		
D121	8-719-988 62	DIODE	1SS355		
D122	8-719-988-62	DIODE	1SS355		
D123	8-719-988-62	DIODE	1SS355		
D124	8-719-988-62	DIODE	1SS355		
D125	8-719-988-62	DIODE	1SS355		
D126	8-719-988-62	DIODE	1SS355		
D127	8-719-988-62	DIODE	1SS355		
D131	8-719-988-62	DIODE	1SS355 (D990)		
D133	8-719-988-62	DIODE	1SS355		
D134	8-719-988-62	DIODE	1SS355		
D135	8-719-988-62	DIODE	1SS355 (UK)		
D136	8-719-988-62	DIODE	1SS355		
D137	8-719-988-62	DIODE	1SS355		
D138	8-719-988-62	DIODE	1SS355 (UK)		
		< INDICATOR TUBE >			
FL101	1-519-742-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC101	8-759-512-46	IC	MSC7162		
IC102	8-749-920-83	IC	GP1U52XB		
IC103	8-759-921-32	IC	SN74HC237AN		
IC104	8-759-916-48	IC	SN74HC151AN		
		< JUMPER RESISTOR >			
JR100	1-216-295-00	METAL CHIP	0	5% 1/10W (UK)	
JR101	1-216-295-00	METAL CHIP	0	5% 1/10W (UK)	
JR102	1-216-295-00	METAL CHIP	0	5% 1/10W (UK)	
		< TRANSISTOR >			
Q101	8-729-900-36	TRANSISTOR	DTC124ES		
Q102	8-729-900-36	TRANSISTOR	DTC124ES		
Q103	8-729-900-36	TRANSISTOR	DTC124ES		
Q104	8-729-900-36	TRANSISTOR	DTC124ES		
Q105	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q107	8-729-119-76	TRANSISTOR	2SA1175-HFE (UK)		

DISPLAY | POW SW

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R101	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R102	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R103	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R104	1-216-075-00	METAL CHIP	12K	5%	1/10W
R105	1-216-089-00	METAL CHIP	47K	5%	1/10W
R107	1-216-025-00	METAL CHIP	100	5%	1/10W
R108	1-216-025-00	METAL CHIP	100	5%	1/10W
R109	1-216-105-00	METAL CHIP	220K	5%	1/10W
R111	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R112	1-216-035-00	METAL CHIP	270	5%	1/10W
R113	1-216-035-00	METAL CHIP	270	5%	1/10W
R114	1-216-035-00	METAL CHIP	270	5%	1/10W
R115	1-216-035-00	METAL CHIP	270	5%	1/10W
R116	1-216-041-00	METAL CHIP	470	5%	1/10W
R120	1-216-049-00	METAL CHIP	1K	5%	1/10W
R121	1-216-037-00	METAL CHIP	330	5%	1/10W
R122	1-216-037-00	METAL CHIP	330	5%	1/10W
R123	1-216-037-00	METAL CHIP	330	5%	1/10W
R124	1-216-037-00	METAL CHIP	330	5%	1/10W
R125	1-216-037-00	METAL CHIP	330	5%	1/10W
R126	1-216-037-00	METAL CHIP	330	5%	1/10W
R127	1-216-037-00	METAL CHIP	330	5%	1/10W
R128	1-216-037-00	METAL CHIP	330	5%	1/10W
R131	1-216-081-00	METAL CHIP	22K	5%	1/10W
R132	1-216-081-00	METAL CHIP	22K	5%	1/10W
R133	1-216-081-00	METAL CHIP	22K	5%	1/10W
R134	1-216-081-00	METAL CHIP	22K	5%	1/10W
R135	1-216-081-00	METAL CHIP	22K	5%	1/10W
R136	1-216-081-00	METAL CHIP	22K	5%	1/10W
R137	1-216-081-00	METAL CHIP	22K	5%	1/10W
R138	1-216-081-00	METAL CHIP	22K	5%	1/10W
R139	1-216-089-00	METAL CHIP	47K	5%	1/10W
R140	1-216-089-00	METAL CHIP	47K	5%	1/10W
R141	1-216-089-00	METAL CHIP	47K	5%	1/10W
R142	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R143	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R144	1-216-081-00	METAL CHIP	22K	5%	1/10W
R145	1-216-073-00	METAL CHIP	10K	5%	1/10W
R146	1-216-089-00	METAL CHIP	47K	5%	1/10W
R147	1-216-041-00	METAL CHIP	470	5%	1/10W (UK)
R148	1-216-041-00	METAL CHIP	470	5%	1/10W (UK)
R149	1-216-073-00	METAL CHIP	10K	5%	1/10W (UK)
		< SWITCH >			
S101	1-554-303-21	SWITCH, TACTILE (POWER)			
S102	1-554-303-21	SWITCH, TACTILE (TUNING FM/AM)			
S103	1-554-303-21	SWITCH, TACTILE (FREQ/INDEX)			
S104	1-554-303-21	SWITCH, TACTILE (TUNING LEVEL)			

Ref. No.	Part No.	Description	Remark
S105	1-554-303-21	SWITCH, TACTILE (FM MODE)	
S106	1-554-303-21	SWITCH, TACTILE (INDEX SELECT +)	
S107	1-554-303-21	SWITCH, TACTILE (INDEX SELECT -)	
S108	1-554-303-21	SWITCH, TACTILE (RESET TUNING +)	
S109	1-554-303-21	SWITCH, TACTILE (RESET TUNING -)	
S110	1-554-303-21	SWITCH, TACTILE (ON/OFF)	
S111	1-554-303-21	SWITCH, TACTILE (LINK ON/OFF)	
S112	1-554-303-21	SWITCH, TACTILE (DIRECT)	
S113	1-554-303-21	SWITCH, TACTILE (MUTING)	
S114	1-554-303-21	SWITCH, TACTILE (△)	
S115	1-554-303-21	SWITCH, TACTILE (▽)	
S116	1-554-303-21	SWITCH, TACTILE (3)	
S117	1-554-303-21	SWITCH, TACTILE (6)	
S118	1-554-303-21	SWITCH, TACTILE (9)	
S119	1-554-303-21	SWITCH, TACTILE (SHIFT)	
S120	1-554-303-21	SWITCH, TACTILE (DBFB)	
S121	1-554-303-21	SWITCH, TACTILE (▷)	
S122	1-554-303-21	SWITCH, TACTILE (◁)	
S123	1-554-303-21	SWITCH, TACTILE (2)	
S124	1-554-303-21	SWITCH, TACTILE (5)	
S125	1-554-303-21	SWITCH, TACTILE (8)	
S126	1-554-303-21	SWITCH, TACTILE (0)	
S127	1-554-303-21	SWITCH, TACTILE (DISCO)	
S128	1-554-303-21	SWITCH, TACTILE (TONE ON/DEFEAT)	
S129	1-554-303-21	SWITCH, TACTILE (HALL)	
S130	1-554-303-21	SWITCH, TACTILE (CURSOR MODE)	
S131	1-554-303-21	SWITCH, TACTILE (1)	
S132	1-554-303-21	SWITCH, TACTILE (4)	
S133	1-554-303-21	SWITCH, TACTILE (7)	
S134	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S135	1-554-303-21	SWITCH, TACTILE (SIMULATED)	
S136	1-554-303-21	SWITCH, TACTILE (THEATER)	
S137	1-554-303-21	SWITCH, TACTILE (SOUND FIELD LIVE)	
S138	1-554-303-21	SWITCH, TACTILE (PHONO)	
S139	1-554-303-21	SWITCH, TACTILE (TUNER)	
S140	1-554-303-21	SWITCH, TACTILE (CD)	
S141	1-554-303-21	SWITCH, TACTILE (DAT)	
S142	1-554-303-21	SWITCH, TACTILE (ACOUSTIC)	
S143	1-554-303-21	SWITCH, TACTILE (DOLBY)	
S144	1-554-303-21	SWITCH, TACTILE (PRO LOGIC MODE)	
S145	1-554-303-21	SWITCH, TACTILE (VIDEO 1:D990)	
S146	1-554-303-21	SWITCH, TACTILE (VIDEO 1:D790, VIDEO2/LD:D990)	
S147	1-554-303-21	SWITCH, TACTILE (VIDEO2/LD:D790, VIDEO3:D990)	
S148	1-554-303-21	SWITCH, TACTILE (TAPE 1)	
S149	1-554-303-21	SWITCH, TACTILE (TAPE 2)	
S150	1-554-303-21	SWITCH, TACTILE (EDIT VIDEO) (D990)	
S151	1-554-303-21	SWITCH, TACTILE (EDIT AUDIO)	

H/P MAIN

Ref. No.	Part No.	Description			Remark
*	1-644-103-11	H/P BOARD			
		*********			
		< CONNECTOR >			
* CNJ55	1-564-506-11	PLUG, CONNECTOR 3P			
		< JACK >			
J700	1-568-515-21	JACK (LARGE TYPE) (HEADPHONES)			
**********					
*	A-4347-764-A	MAIN BOARD, COMPLETE (D790)			
*	A-4347-801-A	MAIN BOARD, COMPLETE (D990)			
		**************************			
*	4-942-204-01	PLATE, GROUND			
		< CAPACITOR >			
C201	1-164-097-11	CERAMIC	0.022uF		50V
C202	1-124-477-11	ELECT	47uF	20%	25V
C203	1-164-097-11	CERAMIC	0.022uF		50V
C204	1-124-903-11	ELECT	1uF	20%	50V
C205	1-164-097-11	CERAMIC	0.022uF		50V
C206	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C207	1-164-097-11	CERAMIC	0.022uF		50V
C208	1-124-925-11	ELECT	2.2uF	20%	100V
C209	1-164-097-11	CERAMIC	0.022uF		50V
C210	1-124-907-11	ELECT	10uF	20%	50V
C211	1-164-097-11	CERAMIC	0.022uF		50V
C214	1-162-286-31	CERAMIC	220PF	10%	50V
C215	1-162-286-31	CERAMIC	220PF	10%	50V
C220	1-162-282-31	CERAMIC	100PF	10%	50V
C501	1-162-282-31	CERAMIC	100PF	10%	50V
C502	1-124-927-11	ELECT	4.7uF	20%	100V
C503	1-162-282-31	CERAMIC	100PF	10%	50V
C504	1-124-477-11	ELECT	47uF	20%	25V
C505	1-130-480-00	MYLAR	0.0056uF	5%	50V
C506	1-130-473-00	MYLAR	0.0015uF	5%	50V
C507	1-124-903-11	ELECT	1uF	20%	50V
C508	1-124-477-11	ELECT	47uF	20%	25V
C510	1-124-927-11	ELECT	4.7uF	20%	100V
C530	1-162-294-31	CERAMIC	0.001uF	10%	50V
C532	1-124-927-11	ELECT	4.7uF	20%	100V
C540	1-124-907-11	ELECT	10uF	20%	50V
C541	1-124-464-11	ELECT	0.22uF	20%	50V
C551	1-162-282-31	CERAMIC	100PF	10%	50V
C552	1-124-927-11	ELECT	4.7uF	20%	100V
C553	1-162-282-31	CERAMIC	100PF	10%	50V

Ref. No.	Part No.	Description			Remark
C554	1-124-477-11	ELECT	47uF	20%	25V
C555	1-130-480-00	MYLAR	0.0056uF	5%	50V
C556	1-130-473-00	MYLAR	0.0015uF	5%	50V
C557	1-124-903-11	ELECT	1uF	20%	50V
C558	1-124-477-11	ELECT	47uF	20%	25V
C560	1-124-927-11	ELECT	4.7uF	20%	100V
C651	1-124-927-11	ELECT	4.7uF	20%	100V (D990)
C652	1-162-288-31	CERAMIC	330PF	10%	50V (D990)
C654	1-162-292-31	CERAMIC	680PF	10%	50V (D990)
C655	1-161-959-00	CERAMIC	22PF	10%	500V (D990)
C656	1-102-230-00	CERAMIC	4PF	0.25PF	500V (D990)
C657	1-124-443-00	ELECT	100uF	20%	10V (D990)
C658	1-124-910-11	ELECT	47uF	20%	50V (D990)
C659	1-161-959-00	CERAMIC	22PF	10%	500V (D990)
C660	1-102-233-00	CERAMIC	33PF	10%	500V (D990)
C661	1-102-233-00	CERAMIC	33PF	10%	500V (D990)
C662	1-136-165-00	FILM	0.1uF	5%	50V (D990)
C663	1-130-491-00	MYLAR	0.047uF	5%	50V (D990)
C664	1-130-491-00	MYLAR	0.047uF	5%	50V (D990)
C667	1-136-165-00	FILM	0.1uF	5%	50V (D990)
C701	1-124-927-11	ELECT	4.7uF	20%	100V
C702	1-162-288-31	CERAMIC	330PF	10%	50V
C703	1-102-989-00	CERAMIC	68PF	5%	500V
C704	1-102-316-00	CERAMIC	15PF	5%	500V
C705	1-124-929-11	ELECT	22uF	20%	100V
C706	1-124-443-00	ELECT	100uF	20%	10V
C707	1-102-230-00	CERAMIC	4PF	0.25PF	500V
C708	1-124-910-11	ELECT	47uF	20%	50V
C709	1-102-233-00	CERAMIC	33PF	10%	500V
C710	1-102-233-00	CERAMIC	33PF	10%	500V
C711	1-136-165-00	FILM	0.1uF	5%	50V
C712	1-136-165-00	FILM	0.1uF	5%	50V
C713	1-130-491-00	MYLAR	0.047uF	5%	50V
C714	1-130-491-00	MYLAR	0.047uF	5%	50V
C721	1-136-165-00	FILM	0.1uF	5%	50V
C722	1-124-471-00	ELECT	1000uF	20%	6.3V
C751	1-124-927-11	ELECT	4.7uF	20%	100V
C752	1-162-288-31	CERAMIC	330PF	10%	50V
C753	1-102-989-00	CERAMIC	68PF	5%	500V
C754	1-102-316-00	CERAMIC	15PF	5%	500V
C755	1-124-929-11	ELECT	22uF	20%	100V
C756	1-124-443-00	ELECT	100uF	20%	10V
C757	1-102-230-00	CERAMIC	4PF	0.25PF	500V
C758	1-124-910-11	ELECT	47uF	20%	50V
C759	1-102-233-00	CERAMIC	33PF	10%	500V
C760	1-102-233-00	CERAMIC	33PF	10%	500V
C761	1-136-165-00	FILM	0.1uF	5%	50V
C762	1-136-165-00	FILM	0.1uF	5%	50V
C763	1-130-491-00	MYLAR	0.047uF	5%	50V

Ref. No.	Part No.	Description			Remark
C764	1-130-491-00	MYLAR	0.047uF	5%	50V
C801	1-124-907-11	ELECT	10uF	20%	50V
C802	1-162-282-31	CERAMIC	100PF	10%	50V
C803	1-124-907-11	ELECT	10uF	20%	50V
C804	1-124-907-11	ELECT	10uF	20%	50V
C805	1-124-925-11	ELECT	2.2uF	20%	100V
C806	1-124-927-11	ELECT	4.7uF	20%	100V
C807	1-124-927-11	ELECT	4.7uF	20%	100V
C808	1-124-927-11	ELECT	4.7uF	20%	100V
C809	1-124-927-11	ELECT	4.7uF	20%	100V
C851	1-124-907-11	ELECT	10uF	20%	50V
C852	1-162-282-31	CERAMIC	100PF	10%	50V
C853	1-124-907-11	ELECT	10uF	20%	50V
C854	1-124-907-11	ELECT	10uF	20%	50V
C855	1-124-925-11	ELECT	2.2uF	20%	100V
C856	1-124-927-11	ELECT	4.7uF	20%	100V
C857	1-124-927-11	ELECT	4.7uF	20%	100V
C858	1-124-927-11	ELECT	4.7uF	20%	100V
C859	1-124-927-11	ELECT	4.7uF	20%	100V
C971	1-125-729-11	ELECT	10000uF	20%	63V(D990)
C971	1-125-743-11	ELECT	8200uF	20%	63V(D790)
C972	1-125-729-11	ELECT	10000uF	20%	63V(D990)
C972	1-125-743-11	ELECT	8200uF	20%	63V(D790)
C973	1-164-097-11	CERAMIC	0.022uF		50V
C974	1-164-097-11	CERAMIC	0.022uF		50V
C975	1-124-618-11	ELECT	2200uF	20%	35V
C976	1-126-105-11	ELECT	1000uF	20%	35V
C979	1-124-484-11	ELECT	220uF	20%	35V
C980	1-126-105-11	ELECT	1000uF	20%	35V
C981	1-124-480-11	ELECT	470uF	20%	25V
C982	1-124-907-11	ELECT	10uF	20%	50V
C983	1-124-907-11	ELECT	10uF	20%	50V

< VIBRATOR >

CF201	1-577-101-11	VIBRATOR, CERAMIC

< CONNECTOR >

CNJ502	1-691-887-11	JACK, PIN 6P (PHONO, CD, DAT REC OUT)
CNJ503	1-580-825-11	JACK, PIN 6P (DAT IN, TAPE1 IN/REC OUT)
CNJ504	1-580-825-11	JACK, PIN 6P (VIDEO1 AUDIO IN/OUT, VIDEO2 LD AUDIO IN)
* CNJ505	1-573-028-11	JACK, PIN 4P (TAPE2 IN/REC OUT)
* CNJ903	1-573-495-11	PLUG, CONNECTOR 6P

Ref. No.	Part No.	Description	Remark

< CONNECTOR >

* CNP22	1-560-531-00	PIN, CONNECTOR 5P	
* CNP54	1-564-507-11	PLUG, CONNECTOR 4P	
* CNP802	1-568-826-11	SOCKET, CONNECTOR 7P	
* CNP803	1-564-505-11	PLUG, CONNECTOR 2P	(D990)
* CNP804	1-568-824-11	SOCKET, CONNECTOR 5P	
* CNS12	1-564-506-11	PLUG, CONNECTOR 3P	
* CNS14	1-564-506-11	PLUG, CONNECTOR 3P	
* CNS57	1-564-506-11	PLUG, CONNECTOR 3P	
* CNS58	1-564-506-11	PLUG, CONNECTOR 3P	
* CNS101	1-568-864-11	SOCKET, CONNECTOR 21P	
* CNS201	1-568-824-11	SOCKET, CONNECTOR 5P	
* CNS206	1-568-824-11	SOCKET, CONNECTOR 5P	
* CNS301	1-573-192-11	CONNECTOR, BOARD TO BOARD 13P	
* CNS303	1-569-755-11	CONNECTOR, BOARD TO BOARD 6P	
CNS304	1-569-667-11	CONNECTOR, BOARD TO BOARD 8P	
* CNS305	1-573-192-11	CONNECTOR, BOARD TO BOARD 13P	

< DIODE >

D202	8-719-987-63	DIODE	1N4148M
D203	8-719-987-63	DIODE	1N4148M
D204	8-719-987-63	DIODE	1N4148M
D205	8-719-987-63	DIODE	1N4148M
D540	8-719-987-63	DIODE	1N4148M
D541	8-719-987-63	DIODE	1N4148M
D542	8-719-987-63	DIODE	1N4148M
D651	8-719-987-63	DIODE	1N4148M (D990)
D652	8-719-987-63	DIODE	1N4148M (D990)
D653	8-719-987-63	DIODE	1N4148M (D990)
D654	8-719-933-36	DIODE	HZS6B1L (D990)
D655	8-719-987-63	DIODE	1N4148M (D990)
D656	8-719-109-60	DIODE	RD2.7ESB2 (D990)
D657	8-719-109-60	DIODE	RD2.7ESB2 (D990)
D658	8-719-987-63	DIODE	1N4148M (D990)
D703	8-719-987-63	DIODE	1N4148M
D704	8-719-987-63	DIODE	1N4148M
D705	8-719-987-63	DIODE	1N4148M
D706	8-719-987-63	DIODE	1N4148M
D707	8-719-987-63	DIODE	1N4148M
D708	8-719-987-63	DIODE	1N4148M
D709	8-719-109-60	DIODE	RD2.7ESB2
D710	8-719-109-60	DIODE	RD2.7ESB2
D711	8-719-987-63	DIODE	1N4148M
D753	8-719-987-63	DIODE	1N4148M
D754	8-719-987-63	DIODE	1N4148M
D758	8-719-987-63	DIODE	1N4148M
D759	8-719-109-60	DIODE	RD2.7ESB2
D760	8-719-109-60	DIODE	RD2.7ESB2

MAIN

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R203	1-249-405-11	CARBON	100	5%	1/4W
R204	1-249-437-11	CARBON	47K	5%	1/4W
R205	1-249-437-11	CARBON	47K	5%	1/4W
R206	1-249-429-11	CARBON	10K	5%	1/4W
R207	1-249-429-11	CARBON	10K	5%	1/4W
R208	1-249-429-11	CARBON	10K	5%	1/4W
R209	1-249-425-11	CARBON	4.7K	5%	1/4W
R210	1-249-437-11	CARBON	47K	5%	1/4W
R211	1-249-421-11	CARBON	2.2K	5%	1/4W
R212	1-249-437-11	CARBON	47K	5%	1/4W
R213	1-249-423-11	CARBON	3.3K	5%	1/4W
R214	1-249-429-11	CARBON	10K	5%	1/4W
R215	1-249-429-11	CARBON	10K	5%	1/4W
R216	1-249-429-11	CARBON	10K	5%	1/4W
R217	1-249-429-11	CARBON	10K	5%	1/4W
R218	1-249-429-11	CARBON	10K	5%	1/4W
R219	1-249-429-11	CARBON	10K	5%	1/4W
R220	1-249-429-11	CARBON	10K	5%	1/4W
R221	1-249-429-11	CARBON	10K	5%	1/4W
R222	1-249-429-11	CARBON	10K	5%	1/4W
R223	1-249-421-11	CARBON	2.2K	5%	1/4W
R225	1-249-421-11	CARBON	2.2K	5%	1/4W
R226	1-249-421-11	CARBON	2.2K	5%	1/4W
R227	1-249-421-11	CARBON	2.2K	5%	1/4W
R228	1-249-429-11	CARBON	10K	5%	1/4W
R229	1-249-429-11	CARBON	10K	5%	1/4W
R230	1-249-421-11	CARBON	2.2K	5%	1/4W
R231	1-249-421-11	CARBON	2.2K	5%	1/4W
R232	1-249-421-11	CARBON	2.2K	5%	1/4W
R233	1-249-421-11	CARBON	2.2K	5%	1/4W
R244	1-249-437-11	CARBON	47K	5%	1/4W
R245	1-249-437-11	CARBON	47K	5%	1/4W
R246	1-249-437-11	CARBON	47K	5%	1/4W
R247	1-249-437-11	CARBON	47K	5%	1/4W
R248	1-249-437-11	CARBON	47K	5%	1/4W
R249	1-249-421-11	CARBON	2.2K	5%	1/4W
R501	1-249-411-11	CARBON	330	5%	1/4W
R502	1-249-441-11	CARBON	100K	5%	1/4W
R503	1-249-441-11	CARBON	100K	5%	1/4W
R504	1-249-416-11	CARBON	820	5%	1/4W
R505	1-247-897-11	CARBON	560K	5%	1/4W
R506	1-249-437-11	CARBON	47K	5%	1/4W
R507	1-249-441-11	CARBON	100K	5%	1/4W
R508	1-249-409-11	CARBON	220	5%	1/4W
R509	1-249-417-11	CARBON	1K	5%	1/4W
R510	1-249-417-11	CARBON	1K	5%	1/4W
R511	1-249-417-11	CARBON	1K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R512	1-249-417-11	CARBON	1K	5%	1/4W
R513	1-249-417-11	CARBON	1K	5%	1/4W
R514	1-249-417-11	CARBON	1K	5%	1/4W
R515	1-249-417-11	CARBON	1K	5%	1/4W
R516	1-249-417-11	CARBON	1K	5%	1/4W
R517	1-249-417-11	CARBON	1K	5%	1/4W
R518	1-249-417-11	CARBON	1K	5%	1/4W
R519	1-249-437-11	CARBON	47K	5%	1/4W
R530	1-249-425-11	CARBON	4.7K	5%	1/4W
R532	1-249-405-11	CARBON	100	5%	1/4W
R533	1-249-421-11	CARBON	2.2K	5%	1/4W
R540	1-249-429-11	CARBON	10K	5%	1/4W
R541	1-247-903-00	CARBON	1M	5%	1/4W
R542	1-249-433-11	CARBON	22K	5%	1/4W
R543	1-249-433-11	CARBON	22K	5%	1/4W
R544	1-249-415-11	CARBON	680	5%	1/4W
R546	1-249-437-11	CARBON	47K	5%	1/4W
R547	1-249-437-11	CARBON	47K	5%	1/4W
R548	1-249-437-11	CARBON	47K	5%	1/4W
R551	1-249-411-11	CARBON	330	5%	1/4W
R552	1-249-441-11	CARBON	100K	5%	1/4W
R553	1-249-441-11	CARBON	100K	5%	1/4W
R554	1-249-416-11	CARBON	820	5%	1/4W
R555	1-247-897-11	CARBON	560K	5%	1/4W
R556	1-249-437-11	CARBON	47K	5%	1/4W
R557	1-249-441-11	CARBON	100K	5%	1/4W
R558	1-249-409-11	CARBON	220	5%	1/4W
R559	1-249-417-11	CARBON	1K	5%	1/4W
R560	1-249-417-11	CARBON	1K	5%	1/4W
R561	1-249-417-11	CARBON	1K	5%	1/4W
R562	1-249-417-11	CARBON	1K	5%	1/4W
R563	1-249-417-11	CARBON	1K	5%	1/4W
R564	1-249-417-11	CARBON	1K	5%	1/4W
R565	1-249-417-11	CARBON	1K	5%	1/4W
R566	1-249-417-11	CARBON	1K	5%	1/4W
R567	1-249-417-11	CARBON	1K	5%	1/4W
R568	1-249-417-11	CARBON	1K	5%	1/4W
R569	1-249-437-11	CARBON	47K	5%	1/4W
R582	1-249-405-11	CARBON	100	5%	1/4W
R596	1-249-437-11	CARBON	47K	5%	1/4W
R597	1-249-437-11	CARBON	47K	5%	1/4W
R598	1-249-437-11	CARBON	47K	5%	1/4W
R644	1-241-891-00	CARBON	330K	5%	1/4W
R651	1-249-438-11	CARBON	56K	5%	1/4W (D990)
R652	1-249-421-11	CARBON	2.2K	5%	1/4W (D990)
R653	1-249-417-11	CARBON	1K	5%	1/4W (D990)
⚠R654	1-249-409-11	CARBON	220	5%	1/4W (D990)

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
D761	8-719-987-63	DIODE 1N4148M	
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-987-63	DIODE 1N4148M	
D803	8-719-987-63	DIODE 1N4148M	
D805	8-719-109-81	DIODE RD4.7ESB2	
D806	8-719-987-63	DIODE 1N4148M	
D814	8-719-987-63	DIODE 1N4148M	
D815	8-719-987-63	DIODE 1N4148M	
D851	8-719-987-63	DIODE 1N4148M	
D852	8-719-987-63	DIODE 1N4148M	
D853	8-719-987-63	DIODE 1N4148M	
D855	8-719-109-81	DIODE RD4.7ESB2	
D856	8-719-987-63	DIODE 1N4148M	
D910	8-719-987-63	DIODE 1N4148M	
D911	8-719-987-63	DIODE 1N4148M	
D974	8-719-934-23	DIODE HZS30-3L	
D978	8-719-200-82	DIODE 11ES2	
D979	8-719-200-82	DIODE 11ES2	
D980	8-719-200-82	DIODE 11ES2	
D981	8-719-200-82	DIODE 11ES2	
		< IC >	
IC202	8-759-071-90	IC uPD75517GF-110-3B9	
IC501	8-759-634-51	IC M5218AP	
IC502	8-759-805-14	IC LC7822	
IC503	8-759-805-14	IC LC7822	
IC701	8-749-921-87	IC STK3102N-MK3	
IC801	8-759-634-50	IC M5218AL	
IC802	8-759-634-51	IC M5218AP	
IC803	8-759-820-11	IC LC7535	
IC804	8-759-634-50	IC M5218AL	
		< COIL >	
L201	1-410-521-11	INDUCTOR 100uH	
* L651	1-420-872-00	COIL, AIR CORE (D990)	
* L701	1-420-872-00	COIL, AIR CORE	
* L751	1-420-872-00	COIL, AIR CORE	
		< TRANSISTOR >	
Q201	8-729-900-63	TRANSISTOR DTA124ES	
Q202	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q203	8-729-900-36	TRANSISTOR DTC124ES	
Q210	8-729-900-63	TRANSISTOR DTA124ES	
Q211	8-729-900-63	TRANSISTOR DTA124ES	
Q212	8-729-900-63	TRANSISTOR DTA124ES	
Q213	8-729-900-63	TRANSISTOR DTA124ES	
Q214	8-729-900-63	TRANSISTOR DTA124ES	
Q531	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q532	8-729-900-36	TRANSISTOR DTC124ES	

Ref. No.	Part No.	Description	Remark
Q581	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q605	8-729-141-46	TRANSISTOR 2SC4431-LK (D990)	
Q651	8-729-119-79	TRANSISTOR 2SC2785-FEK (D990)	
Q652	8-729-140-82	TRANSISTOR 2SA988-PAFAEA (D990)	
Q653	8-729-119-79	TRANSISTOR 2SC2785-FEK (D990)	
Q654	8-729-802-71	TRANSISTOR 2SA1407-D (D990)	
Q655	8-729-209-15	TRANSISTOR 2SD2012 (D990)	
Q656	8-729-104-18	TRANSISTOR 2SC3514-Q (D990)	
Q658	8-729-321-21	TRANSISTOR 2SC4387-OY	
Q659	8-729-141-37	TRANSISTOR 2SA1684-LK (D990)	
Q660	8-729-321-24	TRANSISTOR 2SA1672-OY	
Q661	8-729-140-82	TRANSISTOR 2SA988-PAFAEA (D990)	
Q662	8-729-140-82	TRANSISTOR 2SA988-PAFAEA (D990)	
Q663	8-729-620-18	TRANSISTOR 2SA979-FG (D990)	
Q701	8-729-209-15	TRANSISTOR 2SD2012	
Q703	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q704	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q705	8-729-321-13	TRANSISTOR 2SC4388-O (D990)	
Q705	8-729-321-21	TRANSISTOR 2SC4387-OY (D790)	
Q706	8-729-321-18	TRANSISTOR 2SA1673-OY (D990)	
Q706	8-729-321-24	TRANSISTOR 2SA1672-OY (D790)	
Q707	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q708	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q719	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q721	8-729-184-53	TRANSISTOR 2SC1845-EA	
Q722	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q723	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q751	8-729-209-15	TRANSISTOR 2SD2012	
Q753	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q754	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q755	8-729-321-13	TRANSISTOR 2SC4388-O (D990)	
Q755	8-729-321-21	TRANSISTOR 2SC4387-OY (D790)	
Q756	8-729-321-18	TRANSISTOR 2SA1673-OY (D990)	
Q756	8-729-321-24	TRANSISTOR 2SA1672-OY (D790)	
Q757	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q758	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q801	8-729-900-36	TRANSISTOR DTC124ES	
Q850	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q851	8-729-900-36	TRANSISTOR DTC124ES	
Q890	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q971	8-729-140-96	TRANSISTOR 2SD774-34	

MAIN

Ref. No.	Part No.	Description			Remark
R656	1-249-429-11	CARBON	10K	5%	1/4W (D990)
R657	1-249-429-11	CARBON	10K	5%	1/4W (D990)
R658	1-249-411-11	CARBON	330	5%	1/4W (D990)
⚠R659	1-249-409-11	CARBON	220	5%	1/4W (D990)
R660	1-249-433-11	CARBON	22K	5%	1/4W (D990)
R661	1-249-438-11	CARBON	56K	5%	1/4W (D990)
R662	1-249-414-11	CARBON	560	5%	1/4W (D990)
R663	1-249-417-11	CARBON	1K	5%	1/4W (D990)
⚠R664	1-249-393-11	CARBON	10	5%	1/4W (D990)
⚠R665	1-249-393-11	CARBON	10	5%	1/4W (D990)
⚠R666	1-249-409-11	CARBON	220	5%	1/4W (D990)
R667	1-249-413-11	CARBON	470	5%	1/4W (D990)
⚠R668	1-249-393-11	CARBON	10	5%	1/4W (D990)
⚠R669	1-249-397-11	CARBON	22	5%	1/4W (D990)
⚠R670	1-249-393-11	CARBON	10	5%	1/4W (D990)
R671	1-249-421-11	CARBON	2.2K	5%	1/4W (D990)
R672	1-214-789-00	RES, METAL PLATE		0.1	(D990)
R673	1-214-789-00	RES, METAL PLATE		0.1	(D990)
R674	1-249-421-11	CARBON	2.2K	5%	1/4W (D990)
R675	1-249-431-11	CARBON	15K	5%	1/4W (D990)
R676	1-249-431-11	CARBON	15K	5%	1/4W (D990)
R677	1-260-072-11	CARBON	4.7	5%	1/2W (D990)
R678	1-249-433-11	CARBON	22K	5%	1/4W (D990)
R679	1-260-076-11	CARBON	10	5%	1/2W (D990)
R680	1-249-426-11	CARBON	5.6K	5%	1/4W (D990)
⚠R681	1-249-397-11	CARBON	22	5%	1/4W (D990)
R701	1-249-417-11	CARBON	1K	5%	1/4W
R702	1-249-438-11	CARBON	56K	5%	1/4W
R703	1-249-413-11	CARBON	470	5%	1/4W
⚠R704	1-249-401-11	CARBON	47	5%	1/4W
R705	1-249-410-11	CARBON	270	5%	1/4W
R706	1-249-438-11	CARBON	56K	5%	1/4W
R707	1-249-417-11	CARBON	1K	5%	1/4W
R708	1-249-411-11	CARBON	330	5%	1/4W
⚠R709	1-249-393-11	CARBON	10	5%	1/4W
⚠R710	1-249-393-11	CARBON	10	5%	1/4W
⚠R711	1-249-409-11	CARBON	220	5%	1/4W
⚠R713	1-249-393-11	CARBON	10	5%	1/4W
⚠R714	1-249-393-11	CARBON	10	5%	1/4W
R715	1-214-789-00	RES, METAL PLATE		0.1	
R716	1-214-789-00	RES, METAL PLATE		0.1	
R717	1-249-421-11	CARBON	2.2K	5%	1/4W
R718	1-249-431-11	CARBON	15K	5%	1/4W
R719	1-249-421-11	CARBON	2.2K	5%	1/4W
R720	1-249-431-11	CARBON	15K	5%	1/4W
R721	1-260-072-11	CARBON	4.7	5%	1/2W
R722	1-260-076-11	CARBON	10	5%	1/2W
R725	1-249-417-11	CARBON	1K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R726	1-249-429-11	CARBON	10K	5%	1/4W
R727	1-249-437-11	CARBON	47K	5%	1/4W
R728	1-249-436-11	CARBON	39K	5%	1/4W
R729	1-249-434-11	CARBON	27K	5%	1/4W
R730	1-249-433-11	CARBON	22K	5%	1/4W
R731	1-249-437-11	CARBON	47K	5%	1/4W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-249-438-11	CARBON	56K	5%	1/4W
R753	1-249-413-11	CARBON	470	5%	1/4W
R754	1-249-401-11	CARBON	47	5%	1/4W
R755	1-249-410-11	CARBON	270	5%	1/4W
R756	1-249-438-11	CARBON	56K	5%	1/4W
R757	1-249-417-11	CARBON	1K	5%	1/4W
R758	1-249-411-11	CARBON	330	5%	1/4W
⚠R759	1-249-393-11	CARBON	10	5%	1/4W
⚠R760	1-249-393-11	CARBON	10	5%	1/4W
⚠R761	1-249-409-11	CARBON	220	5%	1/4W
⚠R763	1-249-393-11	CARBON	10	5%	1/4W
⚠R764	1-249-393-11	CARBON	10	5%	1/4W
R765	1-214-789-00	RES, METAL PLATE		0.1	
R766	1-214-789-00	RES, METAL PLATE		0.1	
R767	1-249-421-11	CARBON	2.2K	5%	1/4W
R768	1-249-431-11	CARBON	15K	5%	1/4W
R769	1-249-421-11	CARBON	2.2K	5%	1/4W
R770	1-249-431-11	CARBON	15K	5%	1/4W
R771	1-260-072-11	CARBON	4.7	5%	1/2W
R772	1-260-076-11	CARBON	10	5%	1/2W
R801	1-249-441-11	CARBON	100K	5%	1/4W
R802	1-249-431-11	CARBON	15K	5%	1/4W
R803	1-247-885-00	CARBON	180K	5%	1/4W
R804	1-249-429-11	CARBON	10K	5%	1/4W
R805	1-249-429-11	CARBON	10K	5%	1/4W
R806	1-249-441-11	CARBON	100K	5%	1/4W
R807	1-249-441-11	CARBON	100K	5%	1/4W
R808	1-249-441-11	CARBON	100K	5%	1/4W
R809	1-247-887-00	CARBON	220K	5%	1/4W
R810	1-249-429-11	CARBON	10K	5%	1/4W
R811	1-247-887-00	CARBON	220K	5%	1/4W
R812	1-249-435-11	CARBON	33K	5%	1/4W
R813	1-249-425-11	CARBON	4.7K	5%	1/4W
R814	1-249-425-11	CARBON	4.7K	5%	1/4W
R851	1-249-441-11	CARBON	100K	5%	1/4W
R852	1-249-431-11	CARBON	15K	5%	1/4W
R853	1-247-885-00	CARBON	180K	5%	1/4W
R854	1-249-429-11	CARBON	10K	5%	1/4W
R855	1-249-429-11	CARBON	10K	5%	1/4W
R856	1-249-441-11	CARBON	100K	5%	1/4W

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Ref. No.	Part No.	Description			Remark
R857	1-249-441-11	CARBON	100K	5%	1/4W
R858	1-249-441-11	CARBON	100K	5%	1/4W
R859	1-247-887-00	CARBON	220K	5%	1/4W
R860	1-249-429-11	CARBON	10K	5%	1/4W
R861	1-247-887-00	CARBON	220K	5%	1/4W
R862	1-249-435-11	CARBON	33K	5%	1/4W
R863	1-249-421-11	CARBON	2.2K	5%	1/4W(D790)
R863	1-249-425-11	CARBON	4.7K	5%	1/4W(D990)
R910	1-249-425-11	CARBON	4.7K	5%	1/4W
R911	1-249-425-11	CARBON	4.7K	5%	1/4W
⚠R971	1-215-906-11	METAL OXIDE	15	5%	3W F
⚠R972	1-216-472-00	METAL OXIDE	39	5%	3W F
⚠R975	1-249-409-11	CARBON	220	5%	1/4W
R976	1-249-426-11	CARBON	5.6K	5%	1/4W
		< RELAY >			
RY541	1-515-726-11	RELAY			
RY701	1-515-765-11	RELAY			

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*	A-4347-788-A	POWER BOARD, COMPLETE (UK)	
*	A-4347-811-A	POWER BOARD, COMPLETE (US, Canadian)	
		**********	
	1-533-217-31	HOLDER, FUSE	
*	3-309-144-21	HEAT SINK	
*	4-942-204-01	PLATE, GROUND	
		< PIN, CONNECTOR >	
* BP901	1-564-321-00	PIN, CONNECTOR 2P (UK)	
* BP902	1-564-321-00	PIN, CONNECTOR 2P	
* BP903	1-564-321-00	PIN, CONNECTOR 2P	
		< CAPACITOR >	
⚠C901	1-161-744-00	CERAMIC	0.01uF 400V
C951	1-164-097-11	CERAMIC	0.022uF 50V
C952	1-164-097-11	CERAMIC	0.022uF 50V
C953	1-124-557-11	ELECT	1000uF 20% 25V
C954	1-162-282-31	CERAMIC	100PF 10% 50V
C955	1-124-477-11	ELECT	47uF 20% 25V
C956	1-124-477-11	ELECT	47uF 20% 25V
C957	1-124-903-11	ELECT	1uF 20% 50V
C958	1-164-097-11	CERAMIC	0.022uF 50V
C959	1-124-464-11	ELECT	0.22uF 20% 50V
C960	1-161-494-00	CERAMIC	0.022uF 25V
		< CONNECTOR >	
* CNJ601	1-564-510-11	PLUG, CONNECTOR 7P	
⚠CNJ901	1-540-060-11	OUTLET, AC (POLAR) (US, Canadian)	
⚠CNJ902	1-526-751-00	OUTLET, AC (UK)	
CNP902	1-564-507-11	PLUG, CONNECTOR 4P	
		< DIODE >	
D951	8-719-200-82	DIODE 11ES2	
D952	8-719-200-82	DIODE 11ES2	
D953	8-719-200-82	DIODE 11ES2	
D954	8-719-200-82	DIODE 11ES2	
D955	8-719-987-63	DIODE 1N4148M	
D956	8-719-987-63	DIODE 1N4148M	
D957	8-719-933-41	DIODE HZS6C3L	
D958	8-719-912-20	DIODE 1SS120	
D959	8-719-933-41	DIODE HZS6C3L	
D960	8-719-914-11	DIODE HZ4ALL	
D961	8-719-987-63	DIODE 1N4148M	
		< TRANSISTOR >	
Q951	8-729-209-15	TRANSISTOR 2SD2012	
Q952	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q953	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q954	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q955	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q956	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
⚠R901	1-202-725-00	SOLID	3.3M 10% 1/2W(US, Canadian)
R951	1-249-396-11	CARBON	18 5% 1/6W
R952	1-249-417-11	CARBON	1K 5% 1/4W
R953	1-249-437-11	CARBON	47K 5% 1/4W
R954	1-249-425-11	CARBON	4.7K 5% 1/4W
R955	1-249-433-11	CARBON	22K 5% 1/4W
R956	1-249-429-11	CARBON	10K 5% 1/4W
R957	1-249-417-11	CARBON	1K 5% 1/4W
R958	1-249-429-11	CARBON	10K 5% 1/4W
R959	1-249-429-11	CARBON	10K 5% 1/4W
R960	1-249-417-11	CARBON	1K 5% 1/4W
R961	1-249-417-11	CARBON	1K 5% 1/4W
R962	1-249-426-11	CARBON	5.6K 5% 1/4W
		< RELAY >	
⚠RY901	1-515-617-11	RELAY (UK)	
⚠RY901	1-515-701-11	RELAY (US, Canadian)	
		< TRANSFORMER >	
⚠T901	1-450-358-11	TRANSFORMER, POWER (UK)	
⚠T901	1-450-361-11	TRANSFORMER, POWER (US, Canadian)	

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POWER | P.T | PT PRIMARY | REG | SP. TM | SURR TUNER

Ref. No.	Part No.	Description	Remark
		< VARISTOR >	
⚠VZ901	1-807-180-31	VARISTOR SNR-14A471U (UK)	
⚠VZ901	1-807-293-31	VARISTOR SNR-14A221U (US, Canadian)	
**********			
*	1-644-096-11	P. T BOARD (US, Canadian)	
*	1-644-098-11	P. T BOARD (UK)	
		**********	
	1-533-217-31	HOLDER, FUSE	
		< CONNECTOR >	
* CNP904	1-564-519-11	PLUG, CONNECTOR 4P	
* CNS806	1-564-515-11	PLUG, CONNECTOR 12P	
**********			
*	1-644-110-11	PT PRIMARY BOARD	
		**********	
		< CONNECTOR >	
* CNJ101	1-564-518-11	PLUG, CONNECTOR 3P	
**********			
*	1-644-099-11	REG BOARD	
		*********	
		< CAPACITOR >	
C984	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C985	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C986	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
		< CONNECTOR >	
* CNP903	1-565-482-11	CONNECTOR, BOARD TO BOARD 6P	
		< IC >	
IC971	8-759-604-39	IC M5F78M12L	
IC972	8-759-604-45	IC M5F79M12L	
IC973	8-759-604-35	IC M5F78M05L	
**********			
*	1-644-109-11	SP. TM BOARD	
		**********	
		< CONNECTOR >	
* CNJ54	1-564-508-11	PLUG, CONNECTOR 5P	
* CNP55	1-564-506-11	PLUG, CONNECTOR 3P	

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D641	8-719-987-63	DIODE 1N4148M	
D642	8-719-987-63	DIODE 1N4148M	
D645	8-719-987-63	DIODE 1N4148M	
D646	8-719-987-63	DIODE 1N4148M	
		< TRANSISTOR >	
Q641	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q643	8-729-119-79	TRANSISTOR 2SC2785-FEK	
		< RESISTOR >	
R641	1-249-421-11	CARBON 2.2K 5% 1/4W	
R643	1-249-421-11	CARBON 2.2K 5% 1/4W	
⚠R723	1-216-431-11	METAL OXIDE 560 5% 1W F	
⚠R773	1-216-431-11	METAL OXIDE 560 5% 1W F	
		< RELAY >	
RY641	1-515-790-11	RELAY	
RY643	1-515-765-11	RELAY	
		< SWITCH >	
S701	1-572-322-11	SWITCH, SLIDE (SPEAKERS)	
		< TERMINAL >	
TM701	1-537-376-11	TERMINAL BOARD (SP) (FRONT)	
TM702	1-537-376-11	TERMINAL BOARD (SP) (CENTER, REAR)	
**********			
*	A-4347-767-A	SURR. BOARD, COMPLETE (UK)	
*	A-4347-805-A	SURR. BOARD, COMPLETE (US, Canadian)	
		**********	
		< CAPACITOR >	
C1	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C2	1-126-022-11	ELECT 47uF 20% 16V	
C3	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C4	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C5	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C6	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C9	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C21	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C22	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C23	1-126-022-11	ELECT 47uF 20% 16V	

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Ref. No.	Part No.	Description			Remark
C24	1-126-162-11	ELECT	3.3uF	20%	50V
C25	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C26	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C27	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C28	1-126-301-11	ELECT	1uF	20%	50V
C30	1-126-301-11	ELECT	1uF	20%	50V
C31	1-124-463-00	ELECT	0.1uF	20%	50V
C32	1-126-300-11	ELECT	0.47uF	20%	50V
C33	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V(UK)
C33	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V (US, Canadian)
C34	1-126-162-11	ELECT	3.3uF	20%	50V
C35	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V(UK)
C35	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V (US, Canadian)
C36	1-126-162-11	ELECT	3.3uF	20%	50V
C37	1-126-059-11	ELECT	10uF	20%	50V
C39	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C40	1-124-463-00	ELECT	0.1uF	20%	50V
C41	1-126-059-11	ELECT	10uF	20%	50V
C42	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C43	1-126-101-11	ELECT	100uF	20%	16V
C44	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C45	1-126-162-11	ELECT	3.3uF	20%	50V
C46	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C48	1-126-162-11	ELECT	3.3uF	20%	50V
C49	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C51	1-126-022-11	ELECT	47uF	20%	16V
C61	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C63	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C81	1-102-961-00	CERAMIC	27PF	5%	50V
C82	1-102-961-00	CERAMIC	27PF	5%	50V
C83	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C84	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C85	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C86	1-126-022-11	ELECT	47uF	20%	16V
C87	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C88	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C89	1-126-161-11	ELECT	2.2uF	20%	50V
C90	1-124-463-00	ELECT	0.1uF	20%	50V
C91	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C92	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C93	1-126-022-11	ELECT	47uF	20%	16V
C301	1-126-059-11	ELECT	10uF	20%	50V
C302	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C303	1-126-059-11	ELECT	10uF	20%	50V
C304	1-126-059-11	ELECT	10uF	20%	50V
C305	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C306	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C307	1-124-252-00	ELECT	0.33uF	20%	50V
C308	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C309	1-126-161-11	ELECT	2.2uF	20%	50V
C310	1-126-161-11	ELECT	2.2uF	20%	50V
C311	1-124-250-00	ELECT	0.15uF	20%	50V
C312	1-126-162-11	ELECT	3.3uF	20%	50V
C313	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C314	1-126-059-11	ELECT	10uF	20%	50V
C315	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C316	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C317	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C318	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C319	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C320	1-126-059-11	ELECT	10uF	20%	50V
C321	1-126-059-11	ELECT	10uF	20%	50V
C322	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C323	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C324	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C325	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C326	1-126-022-11	ELECT	47uF	20%	16V
C327	1-124-587-11	ELECT	220uF	20%	6.3V
C329	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C330	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C331	1-126-059-11	ELECT	10uF	20%	50V
C332	1-124-472-11	ELECT	470uF	20%	10V
C333	1-126-163-11	ELECT	4.7uF	20%	50V
C334	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C335	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C336	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C337	1-124-587-11	ELECT	220uF	20%	6.3V
C338	1-126-023-11	ELECT	100uF	20%	16V
C339	1-124-587-11	ELECT	220uF	20%	6.3V
C340	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C341	1-126-022-11	ELECT	47uF	20%	16V
C342	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C343	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C344	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C345	1-163-833-00	CERAMIC CHIP	0.068uF		25V
C346	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C347	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C348	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C349	1-124-768-11	ELECT	4.7uF	20%	50V
C350	1-126-023-11	ELECT	100uF	20%	16V
C351	1-126-059-11	ELECT	10uF	20%	50V
C352	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C353	1-126-059-11	ELECT	10uF	20%	50V
C354	1-126-059-11	ELECT	10uF	20%	50V

SURR TUNER

Ref. No.	Part No.	Description			Remark
C355	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C356	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C357	1-124-252-00	ELECT	0.33uF	20%	50V
C358	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C359	1-126-161-11	ELECT	2.2uF	20%	50V
C360	1-126-161-11	ELECT	2.2uF	20%	50V
C361	1-124-250-00	ELECT	0.15uF	20%	50V
C362	1-126-162-11	ELECT	3.3uF	20%	50V
C363	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C364	1-126-059-11	ELECT	10uF	20%	50V
C365	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C366	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C367	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C368	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C382	1-126-301-11	ELECT	1uF	20%	50V
C383	1-126-163-11	ELECT	4.7uF	20%	50V
C384	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C385	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C386	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C387	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C388	1-126-059-11	ELECT	10uF	20%	50V
C389	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C390	1-126-059-11	ELECT	10uF	20%	50V
C391	1-126-059-11	ELECT	10uF	20%	50V
C392	1-126-059-11	ELECT	10uF	20%	50V
C393	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C394	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C395	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C396	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C397	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C398	1-126-163-11	ELECT	4.7uF	20%	50V
C399	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C401	1-126-163-11	ELECT	4.7uF	20%	50V
C402	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C403	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C404	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C405	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C406	1-126-163-11	ELECT	4.7uF	20%	50V
C407	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C408	1-126-022-11	ELECT	47uF	20%	16V
C409	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C410	1-126-022-11	ELECT	47uF	20%	16V
C411	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C412	1-163-833-00	CERAMIC CHIP	0.068uF		25V
C413	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C414	1-126-096-11	ELECT	10uF	20%	35V
C415	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C416	1-126-163-11	ELECT	4.7uF	20%	50V
C451	1-126-163-11	ELECT	4.7uF	20%	50V

Ref. No.	Part No.	Description			Remark
C452	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C453	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C454	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C455	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C456	1-126-163-11	ELECT	4.7uF	20%	50V
C457	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C458	1-126-022-11	ELECT	47uF	20%	16V
C459	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C460	1-126-022-11	ELECT	47uF	20%	16V
C461	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C462	1-163-833-00	CERAMIC CHIP	0.068uF		25V
C463	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C464	1-126-096-11	ELECT	10uF	20%	35V
C465	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V

< FILTER >

CF1	1-577-070-81	FILTER, CERAMIC
CF2	1-577-070-81	FILTER, CERAMIC
CF21	1-577-075-11	OSCILLATOR, CERAMIC

< COMPOSITION CIRCUIT BLOCK >

CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)

< CONNECTOR >

* CNB2	1-564-506-11	PLUG, CONNECTOR 3P
* CNB3	1-564-506-11	PLUG, CONNECTOR 3P

< CONNECTOR >

* CNJ301	1-573-193-11	CONNECTOR, BOARD TO BOARD 13P
* CNJ303	1-569-753-11	CONNECTOR, BOARD TO BOATD 6P
CNJ304	1-569-670-11	CONNECTOR, BOARD TO BOARD 8P
* CNJ305	1-573-193-11	CONNECTOR, BOARD TO BOARD 13P

< DIODE >

D301	8-719-016-74	DIODE 1SS352
D302	8-719-016-74	DIODE 1SS352

< FRONTEND >

FE1	1-465-006-11	FRONT END (FM) (2 GANG)
FE61	1-236-461-11	ENCAPSULATED COMPONENT

< IC >

IC21	8-759-821-45	IC LA1851N
IC81	8-759-820-91	IC LC7218
IC301	8-759-821-13	IC LM3364K-15
IC303	8-759-801-01	IC LC4966
IC304	8-759-801-01	IC LC4966

Ref. No.	Part No.	Description			Remark
IC305	8-759-823-63	IC LV1001M			
IC306	8-759-047-15	IC LA2780			
IC307	8-759-636-55	IC M5218AFP			
IC308	8-759-801-01	IC LC4966			
IC309	8-759-636-55	IC M5218AFP			
IC310	8-759-636-55	IC M5218AFP			
IC311	8-759-636-55	IC M5218AFP			
IC312	8-759-636-55	IC M5218AFP			
IC401	8-759-072-32	IC TC9184P			
		< JUMPER RESISTOR >			
JR279	1-216-295-00	METAL CHIP	0	5%	1/10W
JR280	1-216-295-00	METAL CHIP	0	5%	1/10W
JR281	1-216-295-00	METAL CHIP	0	5%	1/10W
JR282	1-216-295-00	METAL CHIP	0	5%	1/10W
JR283	1-216-295-00	METAL CHIP	0	5%	1/10W
JR284	1-216-295-00	METAL CHIP	0	5%	1/10W
JR286	1-216-295-00	METAL CHIP	0	5%	1/10W
		< COIL >			
L1	1-408-421-00	INDUCTOR	100uH		
L21	1-410-494-11	INDUCTOR	1MMH		
L301	1-408-421-00	INDUCTOR	100uH		
		< FILTER >			
LPF21	1-235-164-00	FILTER, LOW PASS			
LPF22	1-235-164-00	FILTER, LOW PASS			
		< TRANSISTOR >			
Q1	8-729-230-99	TRANSISTOR	2SC2669-OY		
Q2	8-729-230-99	TRANSISTOR	2SC2669-OY		
Q13	8-729-900-63	TRANSISTOR	DTA124ES		
Q21	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q22	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q24	8-729-900-36	TRANSISTOR	DTC124ES		
Q25	8-729-900-36	TRANSISTOR	DTC124ES		
Q81	8-729-900-63	TRANSISTOR	DTA124ES		
Q82	8-729-900-36	TRANSISTOR	DTC124ES		
Q83	8-729-202-67	TRANSISTOR	2SK246-GR3		
Q84	8-729-230-93	TRANSISTOR	2SC3113-AB		
Q301	8-729-900-36	TRANSISTOR	DTC124ES		
Q302	8-729-900-63	TRANSISTOR	DTA124ES		
Q303	8-729-900-36	TRANSISTOR	DTC124ES		
Q304	8-729-900-63	TRANSISTOR	DTA124ES		
Q305	8-729-900-36	TRANSISTOR	DTC124ES		
Q306	8-729-900-36	TRANSISTOR	DTC124ES		
Q307	8-729-900-63	TRANSISTOR	DTA124ES		
Q308	8-729-900-36	TRANSISTOR	DTC124ES		
Q309	8-729-900-36	TRANSISTOR	DTC124ES		
Q310	8-729-900-63	TRANSISTOR	DTA124ES		
Q311	8-729-900-36	TRANSISTOR	DTC124ES		

Ref. No.	Part No.	Description			Remark
Q312	8-729-209-15	TRANSISTOR	2SD2012		
Q313	8-729-900-36	TRANSISTOR	DTC124ES		
Q314	8-729-900-63	TRANSISTOR	DTA124ES		
Q315	8-729-900-36	TRANSISTOR	DTC124ES		
Q401	8-729-224-61	TRANSISTOR	2SK246-Y		
Q402	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q403	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q404	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q451	8-729-224-61	TRANSISTOR	2SK246-Y		
Q452	8-729-141-30	TRANSISTOR	2SC3623A-UK		
Q453	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q454	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q460	8-729-141-30	TRANSISTOR	2SC3623A-LK		
		< RESISTOR >			
⚠R1	1-249-401-11	CARBON	47	5%	1/4W
R3	1-216-037-00	METAL CHIP	330	5%	1/10W
R4	1-216-037-00	METAL CHIP	330	5%	1/10W
R5	1-216-037-00	METAL CHIP	330	5%	1/10W
R6	1-216-079-00	METAL CHIP	18K	5%	1/10W
R7	1-216-037-00	METAL CHIP	330	5%	1/10W
R8	1-216-043-00	METAL CHIP	560	5%	1/10W
R9	1-216-083-00	METAL CHIP	27K	5%	1/10W
⚠R21	1-249-404-00	CARBON	82	5%	1/4W
R22	1-216-071-00	METAL CHIP	8.2K	5%	1/10W (US, Canadian)
R22	1-216-081-00	METAL CHIP	22K	5%	1/10W (UK)
R23	1-216-049-00	METAL CHIP	1K	5%	1/10W
R24	1-216-085-00	METAL CHIP	33K	5%	1/10W
R25	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R27	1-216-079-00	METAL CHIP	18K	5%	1/10W
R28	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R29	1-216-073-00	METAL CHIP	10K	5%	1/10W
R31	1-216-041-00	METAL CHIP	470	5%	1/10W
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W
R33	1-216-073-00	METAL CHIP	10K	5%	1/10W
R35	1-216-089-00	METAL CHIP	47K	5%	1/10W
R36	1-216-079-00	METAL CHIP	18K	5%	1/10W
R37	1-216-109-00	METAL CHIP	330K	5%	1/10W
R39	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R40	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R41	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R42	1-216-109-00	METAL CHIP	330K	5%	1/10W
R44	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R45	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R46	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
⚠R47	1-249-409-11	CARBON	220	5%	1/4W

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SURR TUNER

Ref. No.	Part No.	Description			Remark
R61	1-216-097-00	METAL CHIP	100K	5%	1/10W
R62	1-216-089-00	METAL CHIP	47K	5%	1/10W
R63	1-216-009-00	METAL CHIP	22	5%	1/10W
R70	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R71	1-216-043-00	METAL CHIP	560	5%	1/10W
R72	1-216-049-00	METAL CHIP	1K	5%	1/10W
R73	1-216-035-00	METAL CHIP	270	5%	1/10W
R74	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R75	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R76	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R77	1-216-025-00	METAL CHIP	100	5%	1/10W
R78	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
⚠R79	1-249-405-11	CARBON	100	5%	1/4W
R81	1-216-049-00	METAL CHIP	1K	5%	1/10W
R82	1-216-049-00	METAL CHIP	1K	5%	1/10W
R83	1-216-049-00	METAL CHIP	1K	5%	1/10W
R84	1-216-049-00	METAL CHIP	1K	5%	1/10W
R85	1-216-073-00	METAL CHIP	10K	5%	1/10W
R86	1-216-049-00	METAL CHIP	1K	5%	1/10W
R87	1-216-073-00	METAL CHIP	10K	5%	1/10W
R88	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R89	1-216-049-00	METAL CHIP	1K	5%	1/10W
R90	1-216-073-00	METAL CHIP	10K	5%	1/10W
R91	1-216-049-00	METAL CHIP	1K	5%	1/10W
⚠R92	1-249-401-11	CARBON	47	5%	1/4W
R301	1-216-105-00	METAL CHIP	220K	5%	1/10W
R302	1-216-105-00	METAL CHIP	220K	5%	1/10W
R303	1-216-105-00	METAL CHIP	220K	5%	1/10W
R304	1-216-025-00	METAL CHIP	100	5%	1/10W
R305	1-216-105-00	METAL CHIP	220K	5%	1/10W
R306	1-216-089-00	METAL CHIP	47K	5%	1/10W
R307	1-216-089-00	METAL CHIP	47K	5%	1/10W
R308	1-216-089-00	METAL CHIP	47K	5%	1/10W
R309	1-216-089-00	METAL CHIP	47K	5%	1/10W
R310	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R311	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R312	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R315	1-216-121-00	METAL CHIP	1M	5%	1/10W
R316	1-216-089-00	METAL CHIP	47K	5%	1/10W
R317	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R318	1-216-097-00	METAL CHIP	100K	5%	1/10W
R319	1-216-041-00	METAL CHIP	470	5%	1/10W
R320	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R321	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R322	1-216-073-00	METAL CHIP	10K	5%	1/10W
R323	1-216-077-00	METAL CHIP	15K	5%	1/10W
R324	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R325	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R326	1-216-105-00	METAL CHIP	220K	5%	1/10W
R327	1-216-105-00	METAL CHIP	220K	5%	1/10W
R328	1-216-077-00	METAL CHIP	15K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R329	1-216-056-00	METAL GLAZE	2K	5%	1/10W
R330	1-216-089-00	METAL CHIP	47K	5%	1/10W
R331	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R332	1-216-081-00	METAL CHIP	22K	5%	1/10W
R333	1-216-081-00	METAL CHIP	22K	5%	1/10W
R334	1-216-105-00	METAL CHIP	220K	5%	1/10W
R335	1-216-073-00	METAL CHIP	10K	5%	1/10W
R336	1-216-097-00	METAL CHIP	100K	5%	1/10W
R337	1-216-097-00	METAL CHIP	100K	5%	1/10W
R338	1-216-105-00	METAL CHIP	220K	5%	1/10W
R339	1-216-073-00	METAL CHIP	10K	5%	1/10W
R340	1-216-073-00	METAL CHIP	10K	5%	1/10W
R341	1-216-073-00	METAL CHIP	10K	5%	1/10W
R342	1-216-113-00	METAL CHIP	470K	5%	1/10W
R343	1-216-113-00	METAL CHIP	470K	5%	1/10W
R344	1-216-073-00	METAL CHIP	10K	5%	1/10W
R345	1-216-049-00	METAL CHIP	1K	5%	1/10W
R346	1-216-073-00	METAL CHIP	10K	5%	1/10W
R347	1-216-089-00	METAL CHIP	47K	5%	1/10W
R348	1-216-049-00	METAL CHIP	1K	5%	1/10W
R349	1-216-073-00	METAL CHIP	10K	5%	1/10W
R351	1-216-105-00	METAL CHIP	220K	5%	1/10W
R352	1-216-105-00	METAL CHIP	220K	5%	1/10W
R353	1-216-105-00	METAL CHIP	220K	5%	1/10W
R354	1-216-025-00	METAL CHIP	100	5%	1/10W
R355	1-216-105-00	METAL CHIP	220K	5%	1/10W
R378	1-216-077-00	METAL CHIP	15K	5%	1/10W
R379	1-216-056-00	METAL GLAZE	2K	5%	1/10W
R380	1-216-089-00	METAL CHIP	47K	5%	1/10W
R381	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R385	1-216-073-00	METAL CHIP	10K	5%	1/10W
R391	1-216-073-00	METAL CHIP	10K	5%	1/10W
R392	1-216-113-00	METAL CHIP	470K	5%	1/10W
R393	1-216-113-00	METAL CHIP	470K	5%	1/10W
R394	1-216-073-00	METAL CHIP	10K	5%	1/10W
R395	1-216-049-00	METAL CHIP	1K	5%	1/10W
R399	1-216-073-00	METAL CHIP	10K	5%	1/10W
R401	1-216-097-00	METAL CHIP	100K	5%	1/10W
R402	1-216-073-00	METAL CHIP	10K	5%	1/10W
R403	1-216-113-00	METAL CHIP	470K	5%	1/10W
R404	1-216-097-00	METAL CHIP	100K	5%	1/10W
R405	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R406	1-216-101-00	METAL CHIP	150K	5%	1/10W
R407	1-216-039-00	METAL CHIP	390	5%	1/10W
R408	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R409	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R410	1-216-095-00	METAL CHIP	82K	5%	1/10W

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SURR TUNER SURR AMP

Ref. No.	Part No.	Description			Remark
R411	1-216-113-00	METAL CHIP	470K	5%	1/10W
R412	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R413	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R414	1-216-115-00	METAL CHIP	560K	5%	1/10W
R415	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R416	1-216-083-00	METAL CHIP	27K	5%	1/10W
R417	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R418	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R419	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R420	1-216-021-00	METAL CHIP	68	5%	1/10W
R421	1-216-049-00	METAL CHIP	1K	5%	1/10W
R422	1-216-049-00	METAL CHIP	1K	5%	1/10W
R423	1-216-097-00	METAL CHIP	100K	5%	1/10W
R424	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R425	1-216-097-00	METAL CHIP	100K	5%	1/10W
R426	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R427	1-216-049-00	METAL CHIP	1K	5%	1/10W
R428	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R451	1-216-097-00	METAL CHIP	100K	5%	1/10W
R452	1-216-073-00	METAL CHIP	10K	5%	1/10W
R453	1-216-113-00	METAL CHIP	470K	5%	1/10W
R454	1-216-097-00	METAL CHIP	100K	5%	1/10W
R455	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R456	1-216-101-00	METAL CHIP	150K	5%	1/10W
R457	1-216-039-00	METAL CHIP	390	5%	1/10W
R458	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R459	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R460	1-216-095-00	METAL CHIP	82K	5%	1/10W
R461	1-216-113-00	METAL CHIP	470K	5%	1/10W
R462	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R463	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R464	1-216-115-00	METAL CHIP	560K	5%	1/10W
R465	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R466	1-216-083-00	METAL CHIP	27K	5%	1/10W
R467	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R468	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R469	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R470	1-216-021-00	METAL CHIP	68	5%	1/10W
R473	1-216-097-00	METAL CHIP	100K	5%	1/10W
R474	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R475	1-216-097-00	METAL CHIP	100K	5%	1/10W
R476	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R477	1-216-049-00	METAL CHIP	1K	5%	1/10W
R478	1-216-071-00	METAL CHIP	8.2K	5%	1/10W

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV21	1-241-628-11	RES, ADJ, CARBON 2.2K (FM SEPARATION)			
RV22	1-241-631-11	RES, ADJ, CARBON 22K (AM STOP LEVEL)			
RV24	1-241-631-11	RES, ADJ, CARBON 22K (FM TUNING LEVEL)			
RV25	1-241-631-11	RES, ADJ, CARBON 22K (AUTO STOP LEVEL)			
		< TRANSFORMER >			
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR (NULL)			
		< TERMINAL >			
* TM1	1-537-264-11	TERMINAL BOARD (ANTENNA) (US, Canadian)			
* TM1	1-537-288-11	TERMINAL BOARD, ANTENNA (PAL) (UK)			
		< TEST PIN >			
* TP1	1-560-060-00	PIN, CONNECTOR 2P			
		< VIBRATOR >			
X301	1-567-132-00	OSCILLATOR, CERAMIC 8.00MHz			
		< VIBRATOR >			
XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)			
**********					
*	A-4347-782-A	SURR. AMP BOARD, COMPLETE (D790)			
*	A-4347-813-A	SURR. AMP BOARD, COMPLETE (D990)			
		**********			
		< CAPACITOR >			
C601	1-124-927-11	ELECT	4.7uF	20%	100V (D790)
C602	1-162-282-31	CERAMIC	100PF	10%	50V (D790)
C603	1-162-282-31	CERAMIC	100PF	10%	50V (D790)
C604	1-124-477-11	ELECT	47uF	20%	25V (D790)
C605	1-124-927-11	ELECT	4.7uF	20%	100V (D790)
C606	1-164-159-11	CERAMIC	0.1uF		50V (D790)
C607	1-130-487-00	MYLAR	0.022uF	5%	50V (D790)
C621	1-124-927-11	ELECT	4.7uF	20%	100V
C622	1-162-282-31	CERAMIC	100PF	10%	50V
C623	1-162-282-31	CERAMIC	100PF	10%	50V
C625	1-124-477-11	ELECT	47uF	20%	25V
C626	1-164-159-11	CERAMIC	0.1uF		50V
C627	1-130-487-00	MYLAR	0.022uF	5%	50V
C629	1-124-927-11	ELECT	4.7uF	20%	100V
C977	1-126-954-11	ELECT	3300uF	20%	35V
C978	1-126-954-11	ELECT	3300uF	20%	35V
C988	1-102-394-11	CERAMIC	0.01uF		250V
C989	1-102-394-11	CERAMIC	0.01uF		250V

SURR AMP VIDEO

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
* CNJ801	1-564-518-11	PLUG, CONNECTOR 3P			
* CNJ802	1-568-850-11	SOCKET, CONNECTOR 7P			
* CNJ803	1-568-848-11	SOCKET, CONNECTOR 5P			
* CNP601	1-564-522-11	PLUG, CONNECTOR 7P			
* CNS800	1-564-519-11	PLUG, CONNECTOR 4P			
* CNS803	1-564-518-11	PLUG, CONNECTOR 3P (D990)			
		< DIODE >			
D601	8-719-987-63	DIODE 1N4148M (D790)			
D621	8-719-987-63	DIODE 1N4148M			
D971	8-719-302-38	DIODE RBV-602-01			
D973	8-719-312-09	DIODE RBA-402			
D975	8-719-987-63	DIODE 1N4148M (D990)			
D976	8-719-987-63	DIODE 1N4148M (D990)			
D977	8-719-987-63	DIODE 1N4148M (D990)			
D982	8-719-987-63	DIODE 1N4148M (D990)			
		< IC >			
IC601	8-759-502-32	IC SI-18752N (D790)			
IC621	8-759-502-32	IC SI-18752N			
		< COIL >			
* L601	1-420-872-00	COIL, AIR CORE (D790)			
* L621	1-420-872-00	COIL, AIR CORE			
		< TRANSISTOR >			
Q601	8-729-101-18	TRANSISTOR 2SB798-DM (D790)			
Q621	8-729-101-18	TRANSISTOR 2SB798-DM			
Q972	8-729-620-05	TRANSISTOR 2SC2603-EF (D990)			
		< RESISTOR >			
R601	1-249-417-11	CARBON	1K	5%	1/4W(D790)
R602	1-249-439-11	CARBON	68K	5%	1/4W(D790)
R603	1-249-439-11	CARBON	68K	5%	1/4W(D790)
R604	1-249-417-11	CARBON	1K	5%	1/4W(D790)
R605	1-217-151-00	RES, METAL PLATE	0.22		(D790)
R607	1-249-389-11	CARBON	4.7	5%	1/4W(D790)
R608	1-249-431-11	CARBON	15K	5%	1/4W(D790)
R609	1-249-393-11	CARBON	10	5%	1/4W(D790)
R610	1-249-431-11	CARBON	15K	5%	1/4W(D790)
R621	1-249-417-11	CARBON	1K	5%	1/4W
R622	1-249-439-11	CARBON	68K	5%	1/4W
R623	1-247-830-11	CARBON	910	5%	1/4W
R624	1-249-439-11	CARBON	68K	5%	1/4W
R625	1-249-417-11	CARBON	1K	5%	1/4W
R626	1-249-431-11	CARBON	15K	5%	1/4W
R627	1-217-151-00	RES, METAL PLATE	0.22		
R628	1-249-389-11	CARBON	4.7	5%	1/4W
R629	1-249-393-11	CARBON	10	5%	1/4W
R630	1-249-431-11	CARBON	15K	5%	1/4W
R823	1-249-415-11	CARBON	680	5%	1/4W(D790)
R977	1-249-421-11	CARBON	2.2K	5%	1/4W(D990)
		< RELAY >			
RY902	1-515-894-11	RELAY (D990)			
**********					
*	1-644-097-11	VIDEO BOARD			
		**********			
		< CAPACITOR >			
C251	1-124-927-11	ELECT	4.7uF	20%	100V
C252	1-124-906-11	ELECT	4.7uF	20%	50V
C253	1-124-472-11	ELECT	470uF	20%	10V
C254	1-124-472-11	ELECT	470uF	20%	10V
C256	1-124-477-11	ELECT	47uF	20%	25V
C257	1-124-927-11	ELECT	4.7uF	20%	100V
		< CONNECTOR >			
* CNJ12	1-564-505-11	PLUG, CONNECTOR 2P			
* CNJ201	1-568-824-11	SOCKET, CONNECTOR 5P			
* CNJ508	1-573-029-11	JACK, PIN 2P (VIDEO1, MONITOR)			
* CNJ509	1-573-029-11	JACK, PIN 2P (VIDEO1, VIDEO2 LD)			
		< IC >			
IC251	8-759-991-77	IC BA7625			
		< COIL >			
L251	1-410-509-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q251	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q252	8-729-119-76	TRANSISTOR 2SA1175-HFE			
		< RESISTOR >			
R251	1-247-804-11	CARBON	75	5%	1/4W
R252	1-247-804-11	CARBON	75	5%	1/4W
R253	1-249-403-11	CARBON	68	5%	1/4W
R254	1-249-429-11	CARBON	10K	5%	1/4W
R255	1-249-403-11	CARBON	68	5%	1/4W
R256	1-249-429-11	CARBON	10K	5%	1/4W
R259	1-249-405-11	CARBON	100	5%	1/4W
R260	1-249-405-11	CARBON	100	5%	1/4W
R261	1-249-405-11	CARBON	100	5%	1/4W
R262	1-249-405-11	CARBON	100	5%	1/4W
R265	1-247-804-11	CARBON	75	5%	1/4W

Ref. No.	Part No.	Description			Remark
*	1-644-104-11	VIDEO 3 BOARD (D990)			
		**********			
		< CAPACITOR >			
C512	1-164-097-11	CERAMIC	0.022uF		50V (D990)
C535	1-124-927-11	ELECT	4.7uF	20%	100V(D990)
C536	1-164-097-11	CERAMIC	0.022uF		50V (D990)
C585	1-124-927-11	ELECT	4.7uF	20%	100V(D990)
		< CONNECTOR >			
CNJ501	1-580-174-31	JACK, PIN(3P FRONT)(VIDEO3 INPUT)(D990)			
		< RESISTOR >			
R535	1-249-417-11	CARBON	1K	5%	1/4W(D990)
R536	1-247-887-00	CARBON	220K	5%	1/4W(D990)
R585	1-249-417-11	CARBON	1K	5%	1/4W(D990)
R586	1-247-887-00	CARBON	220K	5%	1/4W(D990)
**********					
*	1-644-107-11	VOL BOARD			
		*********			
		< CAPACITOR >			
C599	1-124-273-00	ELECT	3.3uF	20%	50V
		< CONNECTOR >			
* CNJ206	1-568-824-11	SOCKET, CONNECTOR 5P			
* CNP14	1-564-509-11	PLUG, CONNECTOR 6P			
* CNP42	1-564-509-11	PLUG, CONNECTOR 6P			
		< IC >			
IC201	8-759-820-62	IC LB1639			
		< RESISTOR >			
R201	1-249-437-11	CARBON	47K	5%	1/4W
R202	1-249-437-11	CARBON	47K	5%	1/4W
R599	1-249-413-11	CARBON	470	5%	1/4W
		< VARIABLE RESISTOR >			
RV502	1-238-965-11	RES, VAR, CARBON 100K/100K (BALANCE)			
RV503	1-241-816-21	RES, VAR, CARBON 100KX4 (MASTER VOLUME)			
**********					

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
11	1-690-091-11	WIRE, FLAT TYPE (21 CORE)	
13	1-575-730-11	WIRE, FLAT TYPE (5 CORE)	
52	1-572-291-31	SWITCH, ROTARY SLIDE	
* 57	1-590-035-11	WIRE, FLAT TYPE (7 CORE)	
58	1-575-730-11	WIRE, FLAT TYPE (5 CORE)	
⚠107	1-575-652-11	CORD, POWER (D790:UK)	
⚠107	1-690-609-11	CORD, POWER (US, Canadian)	
111	1-575-730-11	WIRE, FLAT TYPE (5 CORE)	
⚠F901	1-532-203-00	FUSE, TIME LAG 2A 250V (D790:UK)	
⚠F901	1-576-107-11	FUSE 3.15A 125V (US, Canadian)	
⚠F902	1-532-237-00	FUSE, TIME LAG 3.15A 250V (D790:UK)	
⚠F902	1-532-748-11	FUSE, GLASS TUBE 6.3A 125V(US, Canadian)	
⚠F971	1-532-237-00	FUSE, TIME LAG 3.15A 250V (D790:UK)	
⚠F971	1-576-107-11	FUSE (US, Canadian)	
⚠F972	1-532-237-00	FUSE, TIME LAG 3.15A 250V (D790:UK)	
⚠F972	1-576-107-11	FUSE (US, Canadian)	
⚠T902	1-450-884-11	TRANSFORMER, POWER (D790:UK)	
⚠T902	1-450-885-11	TRANSFORMER, POWER (D790:US, Canadian)	
⚠T902	1-450-886-11	TRANSFORMER, POWER (D990)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-501-369-11	ANTENNA (UK)	
	1-501-374-11	ANTENNA, LOOP	
	1-693-098-11	COMMANDER, STANDARD (RM-P321)(UK)	
	1-693-099-11	COMMANDER, STANDARD (RM-U221) (US, Canadian)	
	3-755-128-21	MANUAL, INSTRUCTION (ENGLISH)	
	3-755-128-31	MANUAL, INSTRUCTION (FRENCH)(Canadian)	
	4-925-079-01	COVER (6), BATTERY (RM-P321, RM-U221)	
*	4-952-676-01	CUSHION	
*	4-952-684-01	INDIVIDUAL CARTON (D790:US, Canadian)	
*	4-952-685-01	INDIVIDUAL CARTON (D790:UK)	
*	4-952-686-01	INDIVIDUAL CARTON (D990)	
	9-910-999-33	INSTRUCTION (Canadian)	
**********			

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-682-548-09	SCREW +BVTT 3X8 (S)	
#2	7-682-548-04	SCREW +BVTT 3X8 (S)	
#3	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#5	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S	
#6	7-682-561-04	SCREW +BVTT 4X8 (S)	

9-957-245-11

Sony Corporation
Audio Group

English
92E0654-1
Printed in Japan
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Published by Customer Relations and Service Group

STR-D790/D990

SONY

SERVICE MANUAL

US Model
Canadian Model
UK Model
STR-D790

US Model
Canadian Model
STR-D990

SUPPLEMENT-1

File this Supplement with the Service Manual.

Block Diagram

9-957-245-81

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Audio Group

English
92F0654-1
Printed in Japan
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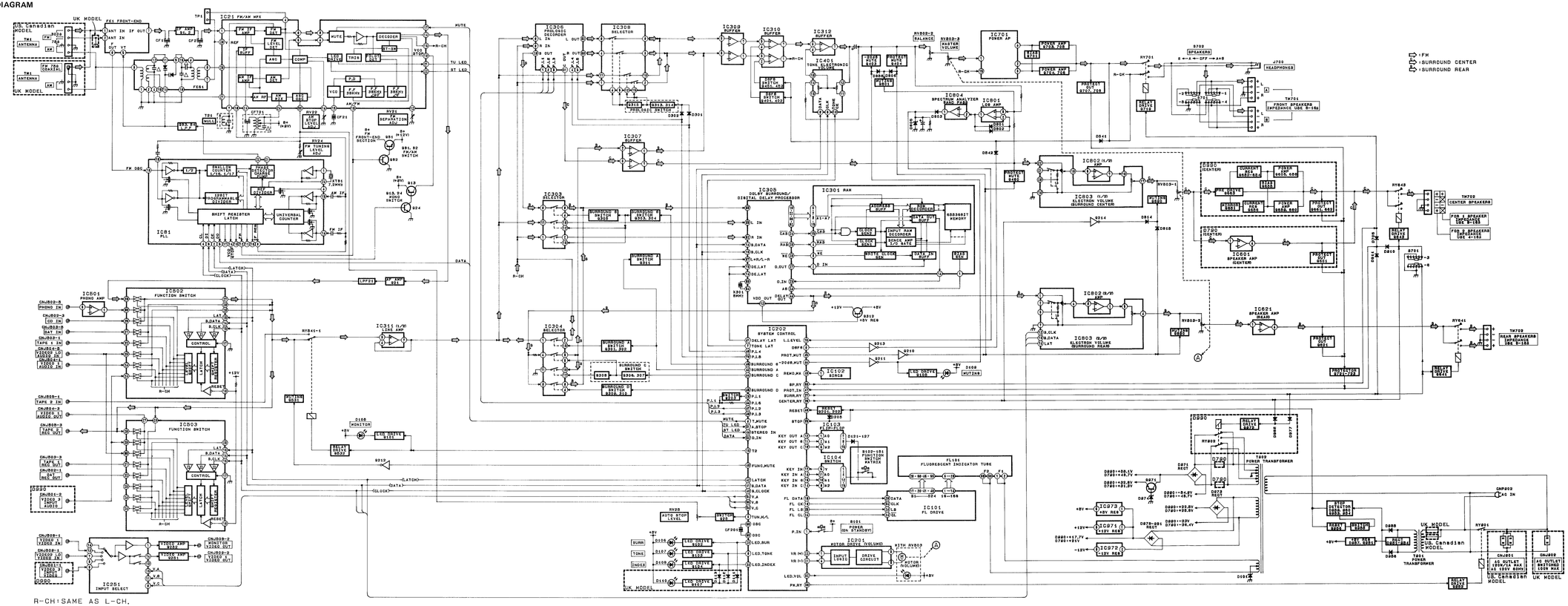
BLOCK DIAGRAM



STR- D790/D990

SONY
SERVICE MANUAL

US Model
Canadian Model
UK Model
STR-D790

US Model
Canadian Model
STR-D990

SUPPLEMENT-2

File this supplement with the service manual.

Subject : Circuit change
(SURR TUNER BOARD)

Main Revised Point : Delete of IC 308 and IC 309.

1. DIAGRAMS

1-1. PRINTED WIRING BOARD
1-2. SCHEMATIC DIAGRAM

2. ELECTRICAL PARTS LIST

1. DIAGRAMS

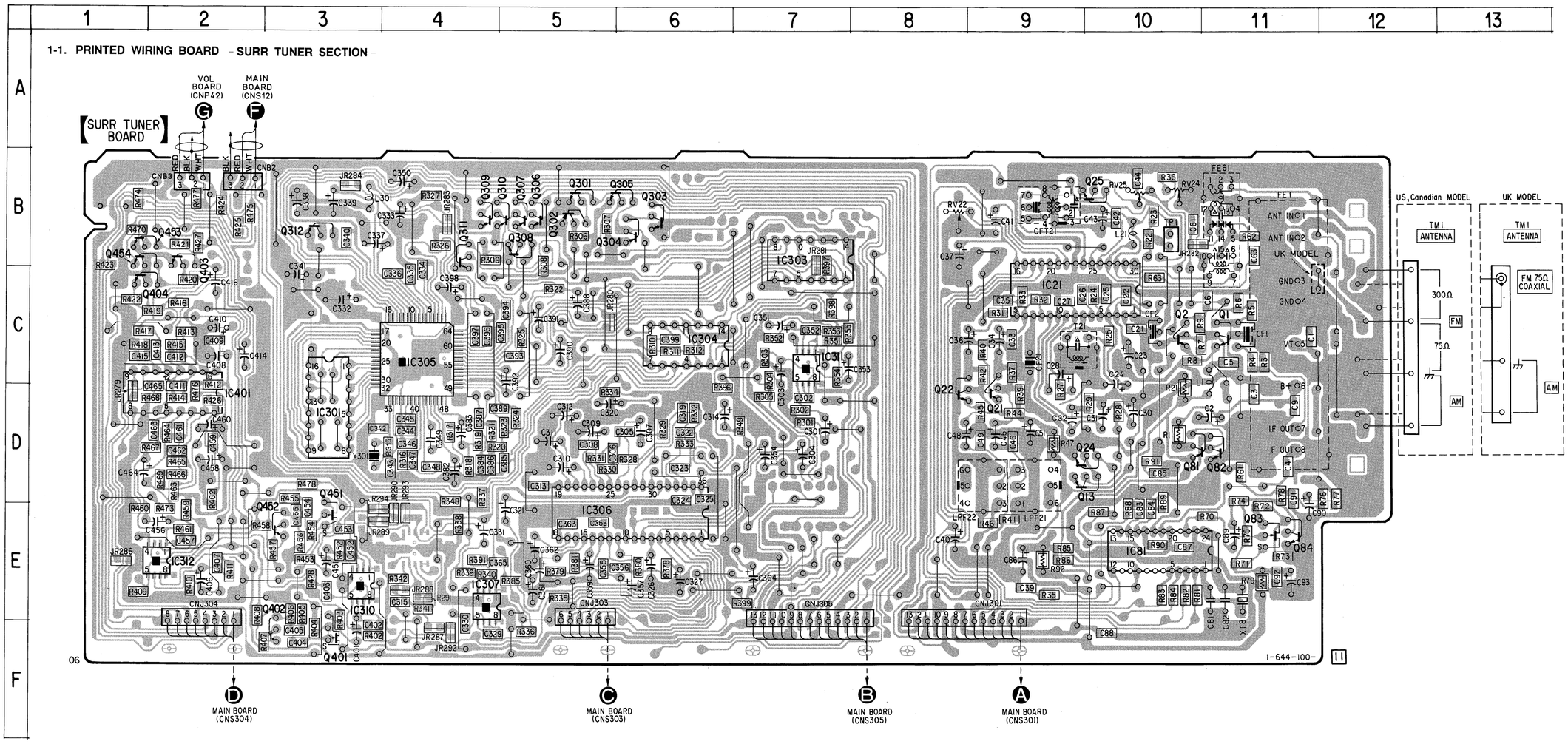
• Semiconductor Location

Ref. No.	Location
IC21	C-9
IC81	E-10
IC301	D-3
IC303	B-7
IC304	C-6
IC305	C-4
IC306	E-5
IC307	E-4
IC310	E-3
IC311	C-7
IC312	E-2
IC401	D-2
Q1	C-10
Q2	C-10
Q13	D-9
Q21	D-9
Q22	D-8
Q24	D-9
Q25	B-10
Q81	D-10
Q82	D-11
Q83	E-11
Q84	E-11
Q301	B-5
Q302	B-5
Q303	B-6
Q304	B-6
Q305	B-5
Q306	B-5
Q307	B-5
Q308	B-5
Q309	B-4
Q310	B-5
Q311	B-4
Q312	B-3
Q401	F-3
Q402	E-3
Q403	B-2
Q404	C-2
Q451	D-3
Q452	E-3
Q453	B-2
Q454	B-1

Note on Mounting Diagram:

- ○—— : Parts extracted from the component side.
- ■ : Parts mounted on the conductor side.
- [-]+- : Indicates side identified with part number.
- ▒▒ : Pattern on the side which is seen.

1-1. PRINTED WIRING BOARD – SURR TUNER SECTION –



1-2. SCHEMATIC DIAGRAM – SURR TUNER SECTION –

• Refer to page 3 for Note.

• IC Block Diagram Information.
Refer to page 38 in original service manual (9-957-245-11).

【SURR TUNER BOARD】

*	US, Canadian MODEL	UK MODEL
R22	8.2K	22K
C33	0.0082μ	0.0068μ
C35	0.0082μ	0.0068μ

IC21 FM/AM MPX

IC81 PLL

IC306 PROLOGIC DECORDER

IC307 BUFFER

IC310 BUFFER

IC311 LINE AMP

IC303 SELECTOR

IC304 SELECTOR

IC305 LV1001M DOLBY SURROUND/ DIGITAL DELAY PROCESSOR

IC301 RAM

IC401 TONE ELECTRONIC VOLUME

IC312 BUFFER

Q1, 2 IF AMP

Q83, 84 L.P.F

Q81, 82 FM/AM SWITCH

Q13, 24 MONO SWITCH

Q21, 22 AF AMP

Q311 SURROUND A SWITCH

Q312 +5V REG

Q301, 302 SURROUND A SWITCH

Q303–305 SURROUND B SWITCH

Q306–308 SURROUND C SWITCH

Q309, 310 SURROUND D SWITCH

Q401, 402, 451, 452 0BFB SWITCH

Q404, 454 PROTECT MUTE

Q403, 453 –20dB MUTE

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- ⚠ : nonflammable resistor.
- ═══ : B+ Line.
- ▬▬▬ : B– Line.
- ▭ : adjustment for repair.
- AC voltage readings in the bias oscillator with a VTVM.
- Voltages and waveforms are dc with respect to ground under no -signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM. (Input impedance 10MΩ)
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ˢ⇨ : SURROUND REAR
  ᶜ⇨ : SURROUND CENTER

2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the part specified in the diagrams or the components used on the set.
- -XX,-X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case,u : μ ,for example :
  uA... : μA..., uPA... : μPA...,
  uPB... : μPB..., uPC... : μPC...,
  uPD... : μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	A-4347-767-A	SURR TUNER BOARD, COMPLETE			(UK)
*	A-4347-805-A	SURR TUNER BOARD, COMPLETE			(US, Canadian)
		**********			
		< CAPACITOR >			
C1	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C2	1-124-910-11	ELECT	47uF	20%	50V
C3	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C4	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C5	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C6	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C9	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C21	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C22	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C23	1-124-910-11	ELECT	47uF	20%	50V
C24	1-123-382-00	ELECT	3.3uF	20%	100V
C25	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C26	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C27	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C28	1-124-903-11	ELECT	1uF	20%	50V
C30	1-124-903-11	ELECT	1uF	20%	50V
C31	1-124-463-00	ELECT	0.1uF	20%	50V
C32	1-124-902-00	ELECT	0.47uF	20%	50V
C33	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V (UK)
C33	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V (US, Canadian)
C34	1-123-382-00	ELECT	3.3uF	20%	100V
C35	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V (UK)
C35	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V (US, Canadian)
C36	1-123-382-00	ELECT	3.3uF	20%	100V
C37	1-124-907-11	ELECT	10uF	20%	50V
C39	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C40	1-124-463-00	ELECT	0.1uF	20%	50V
C41	1-124-907-11	ELECT	10uF	20%	50V
C42	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C43	1-126-176-11	ELECT	220uF	20%	10V
C44	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C45	1-123-382-00	ELECT	3.3uF	20%	100V
C46	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C48	1-123-382-00	ELECT	3.3uF	20%	100V
C49	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C51	1-124-910-11	ELECT	47uF	20%	50V
C61	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C63	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C81	1-102-961-00	CERAMIC	27PF	5%	50V
C82	1-102-961-00	CERAMIC	27PF	5%	50V
C83	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C84	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C85	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C86	1-124-910-11	ELECT	47uF	20%	50V
C87	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C88	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C89	1-124-925-11	ELECT	2.2uF	20%	100V
C90	1-124-463-00	ELECT	0.1uF	20%	50V
C91	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C92	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C93	1-124-910-11	ELECT	47uF	20%	50V
C301	1-124-907-11	ELECT	10uF	20%	50V
C302	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C303	1-124-907-11	ELECT	10uF	20%	50V
C304	1-124-907-11	ELECT	10uF	20%	50V
C305	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C306	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C307	1-124-252-00	ELECT	0.33uF	20%	50V
C308	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C309	1-124-927-11	ELECT	4.7uF	20%	100V

Ref.No.	Part No.	Description		Remark	
C310	1-124-927-11	ELECT	4.7uF	20%	100V
C311	1-124-250-00	ELECT	0.15uF	20%	50V
C312	1-123-382-00	ELECT	3.3uF	20%	100V
C313	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C314	1-124-907-11	ELECT	10uF	20%	50V
C315	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C319	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C320	1-124-907-11	ELECT	10uF	20%	50V
C321	1-124-907-11	ELECT	10uF	20%	50V
C322	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C323	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C324	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C325	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C326	1-124-910-11	ELECT	47uF	20%	50V
C327	1-126-176-11	ELECT	220uF	20%	10V
C329	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C330	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C331	1-124-907-11	ELECT	10uF	20%	50V
C332	1-124-472-11	ELECT	470uF	20%	10V
C333	1-124-927-11	ELECT	4.7uF	20%	100V
C334	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C335	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C336	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C337	1-126-176-11	ELECT	220uF	20%	10V
C338	1-126-101-11	ELECT	100uF	20%	16V
C339	1-126-176-11	ELECT	220uF	20%	10V
C340	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C341	1-124-910-11	ELECT	47uF	20%	50V
C342	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C343	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C344	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C345	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C346	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C347	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C348	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C349	1-124-768-11	ELECT	4.7uF	20%	50V
C350	1-126-101-11	ELECT	100uF	20%	16V
C351	1-124-907-11	ELECT	10uF	20%	50V
C352	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C353	1-124-907-11	ELECT	10uF	20%	50V
C354	1-124-907-11	ELECT	10uF	20%	50V
C355	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C356	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C357	1-124-252-00	ELECT	0.33uF	20%	50V
C358	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C359	1-124-927-11	ELECT	4.7uF	20%	100V
C360	1-124-927-11	ELECT	4.7uF	20%	100V
C361	1-124-250-00	ELECT	0.15uF	20%	50V
C362	1-123-382-00	ELECT	3.3uF	20%	100V
C363	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C364	1-124-907-11	ELECT	10uF	20%	50V
C365	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C382	1-124-903-11	ELECT	1uF	20%	50V
C383	1-124-927-11	ELECT	4.7uF	20%	100V
C384	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C385	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C386	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C387	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C388	1-124-907-11	ELECT	10uF	20%	50V
C389	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C390	1-124-907-11	ELECT	10uF	20%	50V
C391	1-124-907-11	ELECT	10uF	20%	50V
C392	1-124-907-11	ELECT	10uF	20%	50V
C393	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C394	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C395	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C396	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C397	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C398	1-124-927-11	ELECT	4.7uF	20%	100V
C399	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C401	1-126-163-11	ELECT	4.7uF	20%	50V
C402	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C403	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C404	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C405	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C406	1-124-927-11	ELECT	4.7uF	20%	100V
C407	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C408	1-124-910-11	ELECT	47uF	20%	50V
C409	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C410	1-124-910-11	ELECT	47uF	20%	50V
C411	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C412	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C413	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C414	1-126-096-11	ELECT	10uF	20%	35V
C415	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C416	1-124-927-11	ELECT	4.7uF	20%	100V
C451	1-124-927-11	ELECT	4.7uF	20%	100V
C452	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C453	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C454	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C455	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C456	1-124-927-11	ELECT	4.7uF	20%	100V
C457	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C458	1-124-910-11	ELECT	47uF	20%	50V
C459	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C460	1-124-910-11	ELECT	47uF	20%	50V
C461	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C462	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C463	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C464	1-126-096-11	ELECT	10uF	20%	35V

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Ref.No.	Part No.	Description	Remark
C465	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
		< FILTER >	
CF1	1-577-070-81	FILTER, CERAMIC	
CF2	1-577-070-81	FILTER, CERAMIC	
CF21	1-577-075-11	OSCILLATOR, CERAMIC	
		< COMPOSITION CIRCUIT BLOCK >	
CFT21	1-404-853-11	TRANSFORMER, IF(CERAMIC FILTER)	
		< CONNECTOR >	
CNB2	1-564-506-11	PLUG, CONNECTOR 3P	
* CNB3	1-564-506-11	PLUG, CONNECTOR 3P	
		< JACK >	
* CNJ301	1-573-193-11	CONNECTOR, BOARD TO BOARD 13P	
* CNJ303	1-569-753-11	CONNECTOR, BOARD TO BOATD 6P	
CNJ304	1-569-670-11	CONNECTOR, BOARD TO BOARD 8P	
* CNJ305	1-573-193-11	CONNECTOR, BOARD TO BOARD 13P	
		< FRONTEND >	
FE1	1-465-283-11	FRONT END (FM) (2 GANG)	
FE61	1-236-461-11	ENCAPSULATED COMPONENT	
		< IC >	
IC21	8-759-821-45	IC LA1851N	
IC81	8-759-175-87	IC LC7218-ST	
IC301	8-759-821-13	IC LM3364K-15	
IC303	8-759-801-01	IC LC4966	
IC304	8-759-801-01	IC LC4966	
IC305	8-759-823-63	IC LV1001M	
IC306	8-759-098-54	IC LA2780N	
IC307	8-759-636-55	IC M5218AFP	
IC310	8-759-636-55	IC M5218AFP	
IC311	8-759-636-55	IC M5218AFP	
IC312	8-759-636-55	IC M5218AFP	
IC401	8-759-072-32	IC TC9184P	
		< JUMPER RESISTOR >	
JR279	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR280	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR281	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR282	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR283	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR284	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR286	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR287	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR288	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR289	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR290	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR291	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR292	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR293	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR294	1-216-295-91	METAL GLAZE 0 5% 1/10W	
		< COIL >	
L1	1-408-421-00	INDUCTOR 100uH	
L21	1-410-494-11	INDUCTOR 1mH	
L301	1-408-421-00	INDUCTOR 100uH	
		< FILTER >	
LPF21	1-235-164-00	FILTER, LOW PASS	
LPF22	1-235-164-00	FILTER, LOW PASS	
		< TRANSISTOR >	
Q1	8-729-230-XX	TRANSISTOR 2SC2669OY-TPE4	
Q2	8-729-230-XX	TRANSISTOR 2SC2669OY-TPE4	
Q13	8-729-900-63	TRANSISTOR DTA124ES	
Q21	8-729-802-04	TRANSISTOR 2SC2603E-TP	
Q22	8-729-802-04	TRANSISTOR 2SC2603E-TP	
Q24	8-729-900-36	TRANSISTOR DTC124ES	
Q25	8-729-900-36	TRANSISTOR DTC124ES	
Q81	8-729-900-63	TRANSISTOR DTA124ES	
Q82	8-729-900-36	TRANSISTOR DTC124ES	
Q83	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB	
Q301	8-729-900-36	TRANSISTOR DTC124ES	
Q302	8-729-900-63	TRANSISTOR DTA124ES	
Q303	8-729-900-36	TRANSISTOR DTC124ES	
Q304	8-729-900-63	TRANSISTOR DTA124ES	
Q305	8-729-900-36	TRANSISTOR DTC124ES	
Q306	8-729-900-36	TRANSISTOR DTC124ES	
Q307	8-729-900-63	TRANSISTOR DTA124ES	
Q308	8-729-900-36	TRANSISTOR DTC124ES	
Q309	8-729-900-36	TRANSISTOR DTC124ES	
Q310	8-729-900-63	TRANSISTOR DTA124ES	
Q311	8-729-900-36	TRANSISTOR DTC124ES	
Q312	8-729-209-15	TRANSISTOR 2SD2012	
Q401	8-729-224-61	TRANSISTOR 2SK246-Y	
Q402	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q403	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q404	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q451	8-729-224-61	TRANSISTOR 2SK246-Y	
Q452	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q453	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q454	8-729-141-30	TRANSISTOR 2SC3623A-LK	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
⚠R1	1-249-401-11	CARBON	47	5%	1/4W F
R3	1-216-037-00	METAL CHIP	330	5%	1/10W
R4	1-216-037-00	METAL CHIP	330	5%	1/10W
R5	1-216-037-00	METAL CHIP	330	5%	1/10W
R6	1-216-079-00	METAL CHIP	18K	5%	1/10W
R7	1-216-037-00	METAL CHIP	330	5%	1/10W
R8	1-216-043-00	METAL CHIP	560	5%	1/10W
R9	1-216-083-00	METAL CHIP	27K	5%	1/10W
⚠R21	1-249-404-00	CARBON	82	5%	1/4W F
R22	1-216-081-00	METAL CHIP	22K	5%	1/10W (UK)
R22	1-216-071-00	METAL CHIP	8.2K	5%	1/10W (US, Canadian)
R23	1-216-049-00	METAL CHIP	1K	5%	1/10W
R24	1-216-085-00	METAL CHIP	33K	5%	1/10W
R25	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R27	1-216-079-00	METAL CHIP	18K	5%	1/10W
R28	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R29	1-216-073-00	METAL CHIP	10K	5%	1/10W
R31	1-216-047-00	METAL CHIP	820	5%	1/10W
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W
R33	1-216-073-00	METAL CHIP	10K	5%	1/10W
R35	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R36	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R37	1-216-109-00	METAL CHIP	330K	5%	1/10W
R39	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R40	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R41	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R42	1-216-109-00	METAL CHIP	330K	5%	1/10W
R44	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R45	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R46	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
⚠R47	1-249-409-11	CARBON	220	5%	1/4W F
R61	1-216-097-00	METAL CHIP	100K	5%	1/10W
R62	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R63	1-216-009-00	METAL CHIP	22	5%	1/10W
R70	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R71	1-216-043-00	METAL CHIP	560	5%	1/10W
R72	1-216-049-00	METAL CHIP	1K	5%	1/10W
R73	1-216-035-00	METAL CHIP	270	5%	1/10W
R74	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R75	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R76	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R77	1-216-025-00	METAL CHIP	100	5%	1/10W
R78	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
⚠R79	1-247-807-31	CARBON	100	5%	1/4W F
R81	1-216-049-00	METAL CHIP	1K	5%	1/10W
R82	1-216-049-00	METAL CHIP	1K	5%	1/10W
R83	1-216-049-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R84	1-216-049-00	METAL CHIP	1K	5%	1/10W
R85	1-216-073-00	METAL CHIP	10K	5%	1/10W
R86	1-216-049-00	METAL CHIP	1K	5%	1/10W
R87	1-216-073-00	METAL CHIP	10K	5%	1/10W
R88	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R89	1-216-049-00	METAL CHIP	1K	5%	1/10W
R90	1-216-073-00	METAL CHIP	10K	5%	1/10W
R91	1-216-049-00	METAL CHIP	1K	5%	1/10W
⚠R92	1-249-401-11	CARBON	47	5%	1/4W F
R301	1-216-105-00	METAL CHIP	220K	5%	1/10W
R302	1-216-105-00	METAL CHIP	220K	5%	1/10W
R303	1-216-105-00	METAL CHIP	220K	5%	1/10W
R304	1-216-025-00	METAL CHIP	100	5%	1/10W
R305	1-216-105-00	METAL CHIP	220K	5%	1/10W
R306	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R307	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R308	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R309	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R310	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R311	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R312	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R315	1-216-121-00	METAL CHIP	1M	5%	1/10W
R316	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R317	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R318	1-216-097-00	METAL CHIP	100K	5%	1/10W
R319	1-216-041-00	METAL CHIP	470	5%	1/10W
R320	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R321	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R322	1-216-073-00	METAL CHIP	10K	5%	1/10W
R323	1-216-077-00	METAL CHIP	15K	5%	1/10W
R324	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R325	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R326	1-216-105-00	METAL CHIP	220K	5%	1/10W
R327	1-216-105-00	METAL CHIP	220K	5%	1/10W
R328	1-216-077-00	METAL CHIP	15K	5%	1/10W
R329	1-216-056-00	METAL GLAZE	2K	5%	1/10W
R330	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R331	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R332	1-216-081-00	METAL CHIP	22K	5%	1/10W
R333	1-216-081-00	METAL CHIP	22K	5%	1/10W
R334	1-216-105-00	METAL CHIP	220K	5%	1/10W
R335	1-216-073-00	METAL CHIP	10K	5%	1/10W
R336	1-216-097-00	METAL CHIP	100K	5%	1/10W

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

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Ref.No.	Part No.	Description			Remark
R337	1-216-097-00	METAL CHIP	100K	5%	1/10W
R338	1-216-105-00	METAL CHIP	220K	5%	1/10W
R339	1-216-073-00	METAL CHIP	10K	5%	1/10W
R340	1-216-073-00	METAL CHIP	10K	5%	1/10W
R341	1-216-073-00	METAL CHIP	10K	5%	1/10W
R342	1-216-113-00	METAL CHIP	470K	5%	1/10W
R348	1-216-049-00	METAL CHIP	1K	5%	1/10W
R349	1-216-073-00	METAL CHIP	10K	5%	1/10W
R351	1-216-105-00	METAL CHIP	220K	5%	1/10W
R352	1-216-105-00	METAL CHIP	220K	5%	1/10W
R353	1-216-105-00	METAL CHIP	220K	5%	1/10W
R354	1-216-025-00	METAL CHIP	100	5%	1/10W
R355	1-216-105-00	METAL CHIP	220K	5%	1/10W
R378	1-216-077-00	METAL CHIP	15K	5%	1/10W
R379	1-216-056-00	METAL GLAZE	2K	5%	1/10W
R380	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R381	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R385	1-216-073-00	METAL CHIP	10K	5%	1/10W
R391	1-216-073-00	METAL CHIP	10K	5%	1/10W
R396	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R397	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R398	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R399	1-216-073-00	METAL CHIP	10K	5%	1/10W
R402	1-216-073-00	METAL CHIP	10K	5%	1/10W
R403	1-216-113-00	METAL CHIP	470K	5%	1/10W
R404	1-216-097-00	METAL CHIP	100K	5%	1/10W
R405	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R406	1-216-101-00	METAL CHIP	150K	5%	1/10W
R407	1-216-039-00	METAL CHIP	390	5%	1/10W
R408	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R409	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R410	1-216-095-00	METAL CHIP	82K	5%	1/10W
R411	1-216-113-00	METAL CHIP	470K	5%	1/10W
R412	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R413	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R414	1-216-115-00	METAL CHIP	560K	5%	1/10W
R415	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R416	1-216-083-00	METAL CHIP	27K	5%	1/10W
R417	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R418	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R419	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R420	1-216-021-00	METAL CHIP	68	5%	1/10W
R421	1-216-049-00	METAL CHIP	1K	5%	1/10W
R422	1-216-049-00	METAL CHIP	1K	5%	1/10W
R423	1-216-097-00	METAL CHIP	100K	5%	1/10W
R424	1-216-075-00	METAL CHIP	12K	5%	1/10W
R425	1-216-097-00	METAL CHIP	100K	5%	1/10W
R426	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R427	1-216-049-00	METAL CHIP	1K	5%	1/10W
R428	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R452	1-216-073-00	METAL CHIP	10K	5%	1/10W
R453	1-216-113-00	METAL CHIP	470K	5%	1/10W
R454	1-216-097-00	METAL CHIP	100K	5%	1/10W
R455	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R456	1-216-101-00	METAL CHIP	150K	5%	1/10W
R457	1-216-039-00	METAL CHIP	390	5%	1/10W
R458	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R459	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R460	1-216-095-00	METAL CHIP	82K	5%	1/10W
R461	1-216-113-00	METAL CHIP	470K	5%	1/10W
R462	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R463	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R464	1-216-115-00	METAL CHIP	560K	5%	1/10W
R465	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R466	1-216-083-00	METAL CHIP	27K	5%	1/10W
R467	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R468	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R469	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R470	1-216-021-00	METAL CHIP	68	5%	1/10W
R473	1-216-097-00	METAL CHIP	100K	5%	1/10W
R474	1-216-075-00	METAL CHIP	12K	5%	1/10W
R475	1-216-097-00	METAL CHIP	100K	5%	1/10W
R476	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R477	1-216-049-00	METAL CHIP	1K	5%	1/10W
R478	1-216-071-00	METAL CHIP	8.2K	5%	1/10W

< VARIABLE RESISTOR >

RV22	1-241-631-11	RES, ADJ, CARBON 22K
RV24	1-238-019-11	RES, ADJ, CARBON 47K
RV25	1-241-631-11	RES, ADJ, CARBON 22K

< TRANSFORMER >

T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR

< TERMINAL >

* TM1	1-537-288-11	TERMINAL BOARD, ANTENNA (PAL)	(ANTENNA) (UK)
TM1	1-537-264-11	TERMINAL BOARD, ANTENNA	(ANTENNA) (US, Canadian)

< TEST PIN >

* TP1	1-560-060-00	PIN, CONNECTOR 2P

< VIBRATOR >

X301	1-567-132-00	OSCILLATOR, CERAMIC (8.00MHz)

< VIBRATOR >

XT81	1-577-126-21	VIBRATOR, CRYSTAL (7.2MHz)

****

9-957-245-82

Sony Corporation
Audio Group

English
93H0679-1
Printed in Japan
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STR-D790/D990

SONY®
SERVICE MANUAL

US Model
Canadian Model
UK Model

SUPPLEMENT-3

File this supplement with the service manual.

The surr amp borad has been changed. (Only for STR-D990 canadian model.)
SURR AMP BOARD : 1-644-108-11 → 1-645-759-11

English
94C057552-1

Sony Corporation
Audio Group

9-957-245-83

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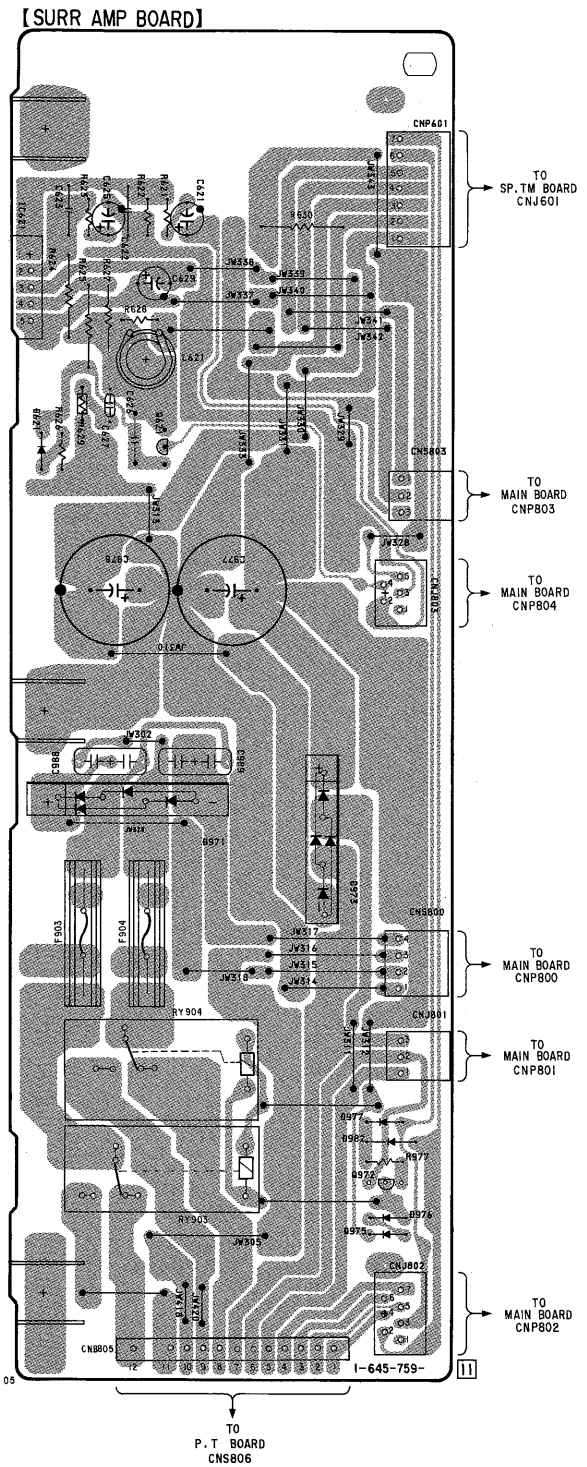
PRINTED WIRING BOARD



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.

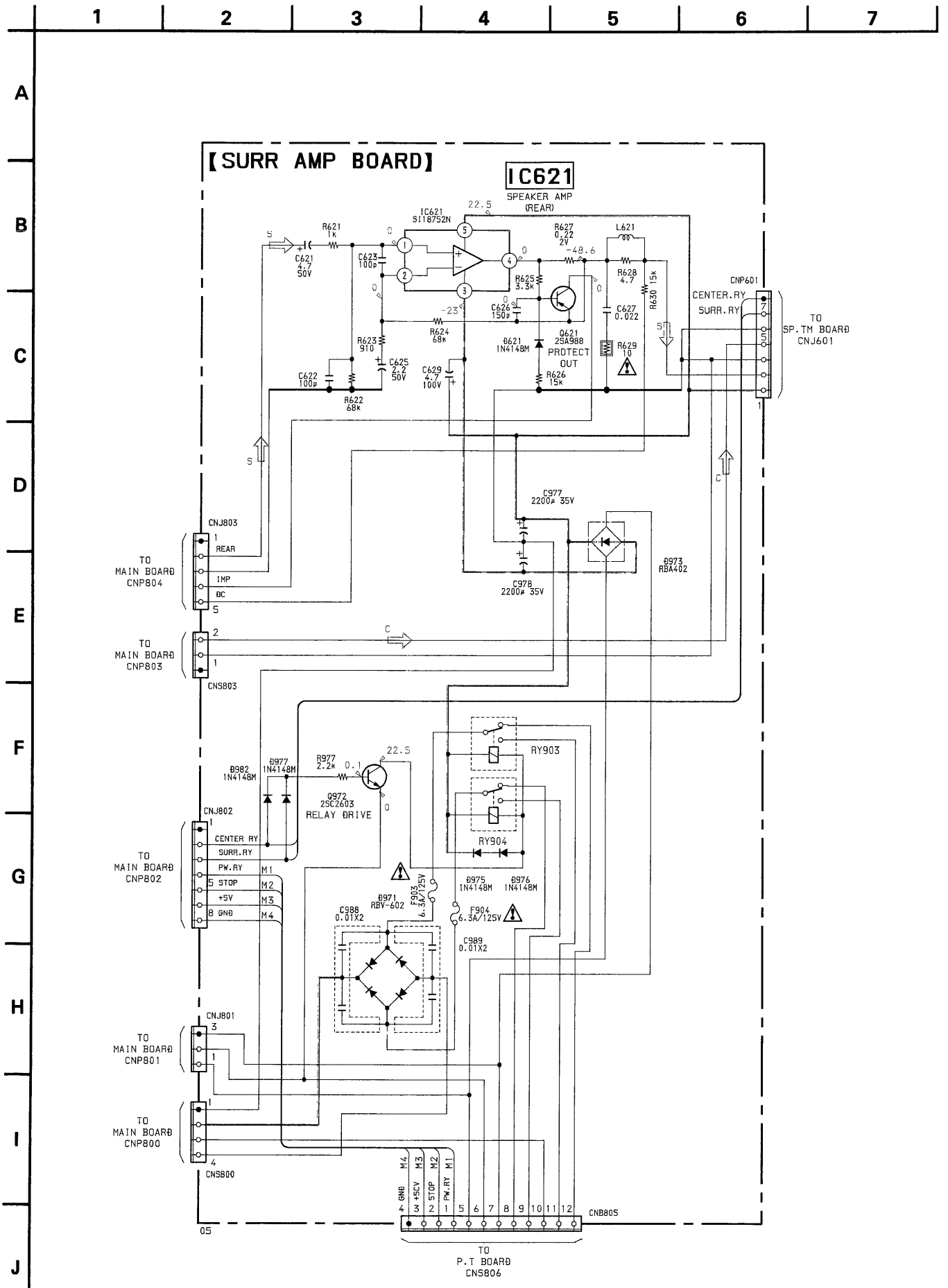
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ◎ ▭▭▭ : B + Line.
- ◎ ▭▭▭ : B − Line.
- ◎ Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- ◎ Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- ◎ Signal path.
  C⇨ : AUDIO (CENTER)
  S⇨ : AUDIO (SURROUND)

Note on Printed Wiring Board:

- o——— : parts extracted from the component side.

SCHEMATIC DIAGRAM



SURR AMP

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When including parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remark
*	A-4356-478-A	SURR AMP BOARD, COMPLETE			
		**********			
	1-533-217-31	HOLDER, FUSE			
*	1-533-293-11	HOLDER, FUSE			
		< CAPACITOR >			
C602	1-124-927-11	ELECT	4.7MF	20%	50V
C622	1-162-282-11	CERAMIC	100PF	10%	50V
C623	1-162-282-11	CERAMIC	100PF	10%	50V
C625	1-124-925-11	ELECT	2.2MF	20%	50V
C626	1-162-284-11	CERAMIC	150PF	10%	50V
C627	1-130-487-91	MYLAR	0.022MF	5%	50V
C629	1-124-927-91	ELECT	4.7MF	20%	100V
C977	1-124-618-51	ELECT	2200MF	20%	35V
C978	1-124-618-51	ELECT	2200MF	20%	35V
C988	1-102-394-11	CERAMIC	0.01MF		250V
C989	1-102-394-11	CERAMIC	0.01MF		250V
		< CONNECTOR >			
* CNJ801	1-564-518-21	PLUG, CONNECTOR 3P			
* CNJ802	1-568-850-11	SOCKET, CONNECTOR 7P			
* CNJ803	1-568-848-11	SOCKET, CONNECTOR 5P			
* CNP601	1-564-522-11	PLUG, CONNECTOR 7P			
* CNS800	1-564-519-41	PLUG, CONNECTOR 4P			
* CNS803	1-564-518-31	PLUG, CONNECTOR 3P			
		< DIODE >			
D621	8-719-987-64	DIODE	1N4148M-TP		
D971	8-719-302-38	DIODE	RBV-602-01		
D973	8-719-312-09	DIODE	RBA-402		
D975	8-719-987-64	DIODE	1N4148M-TP		
D976	8-719-987-64	DIODE	1N4148M-TP		
D977	8-719-987-64	DIODE	1N4148M-TP		
D982	8-719-987-64	DIODE	1N4148M-TP		
		< FUSE >			
F903 ⚠	1-532-748-11	FUSE, GLASS TUBU	6.3A/125V		
F904 ⚠	1-532-748-11	FUSE, GLASS TUBU	6.3A/125V		
		< IC >			
IC621	8-759-502-33	IC	SI-18752		
		< COIL >			
L621	1-420-872-00	COIL, AIR CORE			
		< TRANSISTOR >			
Q621	8-729-140-83	TRANSISTOR	2SA988TP-PAFAEF		
Q972	8-729-620-05	TRANSISTOR	2SC2603-EF		
		< RESISTOR >			
R621	1-249-417-11	CARBON	1K	5%	1/4W
R622	1-249-439-11	CARBON	68K	5%	1/4W
R623	1-247-830-11	CARBON	910	5%	1/4W
R624	1-249-439-11	CARBON	68K	5%	1/4W
R625	1-249-423-11	CARBON	3.3K	5%	1/4W
R626	1-249-431-11	CARBON	15K	5%	1/4W
R627	1-208-602-11	METAL WIRE	0.22	10%	2W F
R628	1-249-389-11	CARBON	4.7	5%	1/4W
R629 ⚠	1-249-393-11	CARBON	10	5%	1/4W F
R630	1-249-431-11	CARBON	15K	5%	1/4W
R977	1-249-421-11	CARBON	2.2K	5%	1/4W